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DISABLING SICKNESS IN COTTON MILL COMMUNITIES OF SOUTH CAROLINA IN 1917.

A STUDY OF SICKNESS PREVALENCE AND ABSENTEEISM, AS RECORDED IN REPEATED CANVASSES, IN RELATION TO SEASONAL VARIATION, DURATION, SEX, AGE, AND FAMILY INCOME.*

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In connection with a study of the relation of dietary, economic, and sanitary conditions to pellagra made during 1916 in seven cotton mill villages of South Carolina, the opportunity was afforded of recording the prevalence of disabling illness among the population under observation.[1] These data were collected during a single canvass of about 4,000 persons.

In 1917 the study of pellagra in cotton mill villages included a much larger population and extended over a longer period of time, so that the opportunity was afforded for enlarging the record of disabling sickness. In all, five separate canvasses were made. The following were the dates on which they were begun and ended and the number of villages included in each:

Date of canvass.	Number of villages included in canvass.
Apr. 2–8	2
Apr. 10–June 9	24
June 18–Aug. 18	24
Oct. 8–Oct. 27	5
Nov. 26–Dec. 22	5

Two villages were canvassed 5 separate times, 3 villages were canvassed 4 times, and 19 villages were canvassed twice.

The inquiry had two specific objectives: (1) To ascertain the amount of disabling sickness on the date of the canvass, or, more specifically, on the day the information was obtained in the course of the enumerator's visit to the household; (2) to record the amount of absenteeism from work in the cotton mills, more particularly of absences due to sickness, during the two months preceding the date of each canvass.

* From Field Investigations of Pellagra, United States Public Health Service. This is the second of a series of papers relating to disabling sickness in South Carolina cotton mill villages, the first being—

Sydenstricker, E., Wheeler, G. A., and Goldberger, J.: Disabling sickness among the population of seven cotton mill villages of South Carolina in relation to family income (1916). Pub. Health Rep. Nov. 22, 1918. Reprint No. 492.

[1] An analysis of these records was published in the first article of the series.

The maximum population included in the 24 villages was approximately 22,000 persons, and the number of observations made for sickness prevalence was 55,067, in the course of which 1,241 cases of illnesses were recorded as disabling. The maximum number of wage earners recorded for any month for absenteeism was 5,034, and the minimum was 381.

The method of the canvass was as follows:

Enumerators visited each household, and from a responsible member of the household, usually the housewife, secured, among other data, facts as to the sex, age, occupation, earnings, and regularity of employment of each individual member of the household and as to other sources of family income. Specific inquiry was made as to the prevalence of "sickness" in the household at the time of the visit and absenteeism from work in the cotton mill during the two months preceding the date of inquiry.

"Sickness" for the purpose of this study, and to make it comparable with this term as used in other "sickness surveys," was defined as any disability, other than industrial accident, which prevented the person from working or attending to any other customary pursuit. Accordingly, wage earners were "sick" when they were unable to work, even though they might be up and about. The definition had to be interpreted for children and nonwage earners in such a way that the data for all classes would be comparable, and in this some difficulties were experienced. For persons confined to bed, the definition was easily applied; but in the case of housewives and other women who said they were sick but were doing housework or at least were not confined to bed, the judgment of the enumerators had to be depended upon. It was emphasized in the instructions given the enumerators that disabling sickness only was to be recorded, so that the results of the census undoubtedly give a minimum amount of disability rather than a maximum.

In recording absenteeism from work, the statement of the housewife or other responsible member of the family was accepted. The date of each absence was recorded as well as whether or not it was due to sickness or other causes.

In setting forth the results of this study, we have not felt that the data warranted more than a very elementary presentation. The method of manifold classification has been resorted to exclusively, but without any attempt to express the relationships in terms of coefficients. We have not thought it necessary to present the probable errors of the rates or of their differences. The number of observations included in several of the classes appearing in the analysis is obviously small and the significance of any results depends, perhaps, more on the degree of their consistency than on the statistical reliability of any particular rate.

I. SICKNESS PREVALENCE.

1. IN RELATION TO SEX, AGE, AND SEASON OF YEAR.

In Table 1 are shown the rates of disabling sickness among persons of different sexes at each of these six periods. These rates properly may be termed "prevalence rates," since they indicate the proportion of the population observed who were sick on the day of the enumerator's visit.

TABLE 1.—*Prevalence of disabling sickness in the population of several cotton-mill villages on dates of canvasses made during 1917, by sex.*

Sex.	Disability per 1,000 persons [a] in specified period.					
	April 2–May 5.	May 7–June 9.	June 18–July 14.	July 16–Aug. 18.	Oct. 8–27.	Nov. 26–Dec. 22.
All persons [b]	25.3	36.5	26.6	23.0	18.6	18.1
Males	26.9	37.7	28.9	22.3	18.8	18.9
Females (except confinements)	23.8	34.4	24.5	23.5	18.3	17.5
Females (including confinements)	26.0	35.9	26.6	24.6	19.9	18.1

[a] Adjusted to a standard age distribution. For unadjusted rates and figures see Appendix, Table A.
[b] Excluding confinements.

It is possible to regard the rates at the various periods of the canvass as indicating roughly the seasonal variation in disabling sickness. Thus considered, the rates are found to vary from 18.8 to 36.5 per 1,000 persons observed. Contrary to the results afforded from other sickness records,[2] a period of rising sickness prevalence is indicated during April and May, and a falling prevalence in the latter part of June and the first part of July and thereafter. Just when the crest of this "wave" of ill health, if it may be so termed, was reached, can not, of course, be determined from our data; the fact that a period of high prevalence did occur in the late spring and early summer is quite evident and is unusual. It will be recalled that the usual seasonal curve of sickness, in the absence of marked epidemics, generally reaches its peak in the late winter and early spring and follows a fairly consistent downward course until the summer low level is reached.

[2] *Cf* various studies of records of sickness and wage-earning adults from Statistical Office and published in the Public Health Reports during 1920, 1921, and 1922:
Dean K. Brundage: Sickness and absenteeism during 1919 in a large industrial establishment. Sept. 10, 1920. (Reprint No. 611.)
—— Diseases prevalent among steel workers in a Pennsylvania city. Dec. 31, 1920. (Reprint No. 622.)
—— Sickness among office workers. Mar. 10, 1922. (Reprint No. 733.)
—— Sickness frequency among industrial employees. Dec. 3, 1920; Mar. 4, 1921; July 1, 1921; and Jan. 6, 1922. (Reprints Nos. 624, 644, 671, and 721.)
—— Disabling sickness among employees of a rubber manufacturing establishment in 1918, 1919, and 1920. Dec. 15, 1922. (Reprint No. 804.)
—— Incidence of serious morbidity among a group of wage earners. Dec. 29, 1922. (Reprint No. 807.)
Also, B. S. Warren and Edgar Sydenstricker: Statistics of disability. Apr. 21, 1916. (Reprint No. 335.)
Edgar Sydenstricker and Dean K. Brundage: Industrial establishment disability records as a source of morbidity statistics. Quart. Pub. Am. Stat. Assoc., March, 1924.

The rate for males was found to be higher than for females, if confinement cases are excluded, at every period save one (July 16–August 18), the greatest differences being at the first three periods, which are made during April, May, and June–July. We do not feel that this difference may be accepted entirely without question, on account of certain deficiencies in the data, to which reference will be made later.

For convenience in making certain comparisons, the average number of days of sickness per person may be estimated on an annual basis.[3] While our surveys may be considered as fairly representative of the period April 2–December 22 (176 days of actual canvass), the annual figures thus estimated are probably too low, since three months of relatively high prevalence, as shown by other experience, are not included; but they properly may be compared with each other.

Using the adjusted rates in Table 1 as a basis, the indicated annual average days of disabling sickness per person for males and females are given in Table 2. The reservation already made regarding a comparison of the male and female rate should be kept in mind in interpreting the above figures.

TABLE 2.—*Average annual number of days of disabling sickness per person in the population of South Carolina, 1917, by sex.*

Sex.	Average number of days of disability per person per year.[1]
All persons [2]	9.3
Males	9.6
Females (excluding confinements)	8.9
Females (including confinements)	9.4

[1] Estimated on sickness prevailing at 6 canvasses made during a period of 176 days from Apr. 2–Dec. 22, 1922.
[2] Excluding confinements.

In considering the specific (age) rates obtained in the different canvasses, the two summer periods and the two autumn periods were combined. In each case the groups which were combined had fairly similar rates and there was no other indication that sickness prevalence varied widely for the periods thus combined. Furthermore, it was

[3] The method used *weights* the sickness prevalence rates for the six periods according to the number of days covered by the canvass and thus presumably according to their value as indicators of the prevalence of sickness during the specific season of the year. The arithmetic procedure may be illustrated as follows: $(0.0253\times34)+(0.0365\times34)+(0.0266\times27)+(0.0230\times34)+(0.0186\times20)+(0.0181\times27)=4.4621$, which, when multiplied by the factor $\frac{365}{176}$, gives 9.3 as the average number of days of sickness per person per year.

It may be noted that an *unweighted* average of the six rates (0.0247) multiplied by the factor $\frac{365}{1}$ gives nearly the same result (9.02 days).

found that the age distributions of the population canvassed in each of the six periods used in Table 1 were so similar that any combination of periods would not be affected by the age factor.[4]

TABLE 3.—*Prevalence of disabling sickness in the population of several cotton-mill villages on dates of canvasses made during 1917, by sex and age.*

Age group.	Rate per 1,000 persons in specified period.[1]			
	Apr. 2 to May 5.	May 7 to June 9.	June 18 to Aug. 18.	Oct. 8 to Dec. 22.
ALL PERSONS.				
−5	21.9	39.3	20.1	11.6
5–14	12.0	16.9	8.0	6.5
15–24	23.7	30.0	22.2	10.7
25–44	24.8	29.9	25.8	21.7
45+	42.9	69.1	45.5	37.9
MALES.				
−5	16.4	51.4	19.7	12.5
5–14	11.7	15.5	8.8	7.7
15–24	22.5	27.6	15.0	9.9
25–44	24.4	23.2	21.1	23.2
45+	55.7	80.9	60.3	35.7
FEMALES.[2]				
−5	27.9	27.0	20.5	10.6
5–14	12.2	18.5	7.2	5.2
15–24	24.8	31.8	28.1	11.5
25–44	25.2	36.6	30.3	20.3
45+	30.7	56.6	30.8	40.1

[1] For figures see Appendix II.

[2] Excluding confinements.

Table 3 gives the rates of disabling sickness per 1,000 for persons of different ages at each of these four periods of the year 1917. Practically the same seasonal variation is indicated for each age group and for each of the sexes with one marked exception, males of the age group 25–44, which group had about the same amount of sickness throughout the four periods. Our data are not of a nature to suggest any explanation for the apparent freedom of this group from the effects of those factors which brought about a definite seasonal variation in sickness among all other persons.

The indicated average number of days of disabling sickness per year for persons of different ages and of each sex is given in Table 4 and Figure 1. These averages were obtained by the method already described.

[4] The age distribution of the populations at each of the six periods and also of the population of the United States is given in Table C of the Appendix. The large number of children and young people and the small number of old people in the mill villages as compared with the United States as a whole is very marked.

TABLE 4.—*Estimated annual number of days of disabling sickness for persons of different age and sex among families of cotton-mill employees in South Carolina mill villages in 1917.*[1]

Age group (years).	Number of days of disability per person.		
	Both sexes.	Males.	Females.[2]
Under 5	8.0	8.5	7.5
5–9	3.1	3.3	2.9
10–14	4.4	4.3	4.4
15–24	7.6	6.4	8.7
25–34	9.2	7.7	10.7
35–44	9.4	9.2	9.5
45–54	12.7	12.5	13.1
55 and over	22.1	29.9	14.8

[1] Based on successive canvasses in 24 villages. Visits made between Apr. 2 and Dec. 22; only persons ill on day of visit recorded.
[2] Exclusive of confinements.

In general, both sexes show the characteristic age curves of morbidity. Practically no difference between the sexes is shown in the age group, "under 15," but in the age group "15–34" the women were sick from two to three days more a year than males of similar ages, in spite of the fact that disability due to confinement is excluded. If reference be made again to Table 3, it will be seen that the excess in the female disability rate at the ages 15–44 occurred almost entirely during the period May 7–August 18, which is, roughly, the period of pellagra prevalence. The higher rate among males at the older ages is probably due in some degree to the interpretation of "disabling sickness" by the enumerators. It is evident that a man 60 years old and unable to work might be considered disabled, though the cause was nothing more than old age, while a woman of similar age had no "occupation" and was not likely to be considered disabled unless evidently suffering from some specific disease.[5]

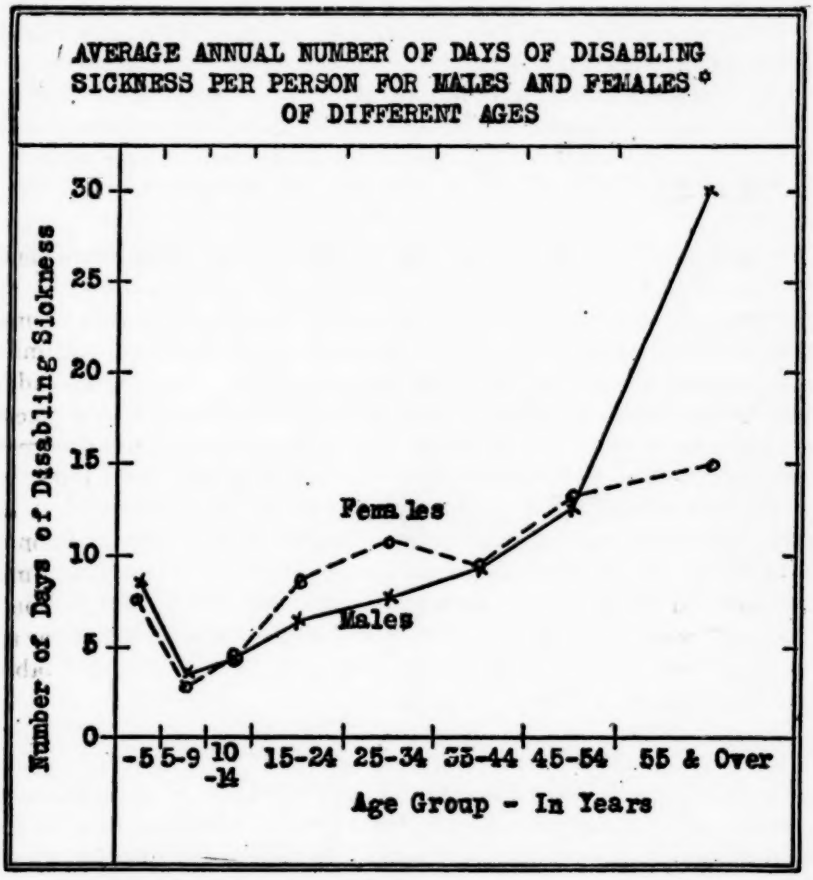
2. IN RELATION TO FAMILY INCOME.

In the study of 1916, based on a single canvass of approximately 4,000 persons in seven cotton-mill villages in South Carolina,[6] it was found that a very definite association existed between family income and the rate for prevalence of sickness. The results of the repeated canvasses of a very much larger population in 1917 corroborates fully the results of the earlier study.

From the association between low income and a high sickness rate it can *not* be assumed, of course, that low income is *per se* a cause of ill health. It seems to us, however, that the knowledge that such an association does exist constitutes an important step in an analysis of

[5] Morbidity surveys made by the Metropolitan Life Insurance Co., covering half a million people, showed an average annual disability of 25.3 days per person for males 55 years of age or older, and 20.7 days for females of the same ages. See "Some recent morbidity data," compiled by Margaret Loomis Stecker; published by the Metropolitan Life Insurance Co., 1919.
[6] Supra cit.

the conditions which affect the health of a population. It suggests the importance of further study of what those conditions actually are which affect that considerable proportion of our population which is really poor. Is this high sickness rate a reflection only of the results of a selective process by which the less healthy members of the population, including those with a poor physical and mental



* Exclusive of confinement.

FIG. 1.

inheritance, naturally gravitate toward a lower economic level because of their inability to earn an adequate living? Or can we assume that low income—the lack of an adequate power to purchase the things which make for more healthful conditions of living—is the sole cause of a high sickness rate? The reasonable hypothesis, of course, is that there is an important element of truth in both assumptions. And the obvious next step, it would seem, is a determination and evaluation, by carefully planned and scientifically

conducted studies, of the relative importance of the various factors that are involved.

The present inquiry does not go beyond a very simple analysis of the data collected, namely, a comparison of the sickness rates for persons of different sex and age classified according to family incomes and for persons with different family incomes at several seasons of the year. So far as we are aware, no other study so far has afforded even crude material in so much detail and the results are interesting and at times suggestive.

In classifying the population of these 24 villages according to their economic status in 1917, the family income was taken as a basis. Nearly all of the population were dependent economically on the families with which they lived. A small percentage were boarders with individual incomes; but since they were subject to the same living conditions as the families with which they boarded, it seemed fair to classify them according to economic status of the families. Furthermore, we may, in general, expect a person to choose to board with a family of approximately his own economic status.

The total family income was computed for the two calendar months preceding the enumerator's visit. Individual earnings were obtained by multiplying the daily wage, as shown by the mill pay rolls, by the total working days less the days lost from work reported to the enumerator. For wage-earning persons not employed by the mill, the informant's statement as to earnings was used. Income from other sources also was considered. In case of boarders, data concerning the amount paid weekly and the cost of the family's food supply were obtained, so that it was possible to compute the net income from boarders. Some families supplemented their earnings by keeping a cow, or having a garden, or raising poultry or hogs; in all such cases the net income from each source for the particular two months was computed. Each family was questioned carefully for complete data regarding income from all miscellaneous sources. It is believed that the total income has been determined with a fairly high degree of accuracy. The family income for a two-months' period was then reduced to an average weekly income. This was still further refined to the weekly income "per ammain"—a unit scale prepared to evaluate the needs of persons of any age or sex as a percentage of the total requirements of an adult male at the time that his requirements are a maximum. Thus, maintenance for the young adult male is 1.00, and, for convenience, it was called an "ammain." By means of the "ammain" scale, families of any size or composition may be reduced to a common denominator, in terms of which the incomes for all are strictly comparable.[7] Income as

[7] For a full discussion of "income per ammain" see "A method of classifying families according to incomes in studies of disease prevalence." Pub. Health Rep., Nov. 26, 1920. (Reprint No. 623.)

used in this paper is always the average weekly income of the family per ammain.

This association of income and the prevalence of disabling sickness, as shown by the 1917 study, is brought out by Table 5. In every period save one (Oct. 8–27) the rate is distinctly higher among persons of low income than among those in the highest income group. In October the rates for women do not vary regularly according to income; this, however, is one of the smaller groups and the sickness rate is low, only a few cases being included.

TABLE 5.—*Prevalence of disabling sickness in the population of several cotton-mill villages on dates of canvasses made during 1917, by family income.*

Family income per ammain per week.	Disability rate per 1,000 persons.[1]					
	Apr. 2 to May 5.	May 7 to June 9.	June 18 to July 14.	July 16 to Aug. 18.	Oct. 8 to Oct. 27.	Nov. 26 to Dec. 22.
ALL PERSONS.[2]						
All incomes	25.3	36.5	26.6	23.0	18.6	18.1
Under $4.50	35.9	51.8	43.3	30.2	16.9	21.9
$4.50 to $6.49	17.0	27.9	22.0	21.6	20.4	14.0
$6.50 and over	15.5	25.1	10.9	16.9	13.2	10.3
MALES.						
All incomes	26.9	37.7	28.9	22.3	18.8	18.9
Under $4.50	44.0	58.4	49.9	30.5	23.3	31.9
$4.50 to $6.49	15.1	27.4	20.5	17.6	17.9	20.4
$6.50 and over	11.4	19.8	10.6	16.7	9.0	7.1
FEMALES (EXCLUSIVE OF CONFINEMENT CASES).						
All incomes	23.8	34.4	24.5	23.5	18.3	17.5
Under $4.50	28.4	44.4	35.0	28.7	10.0	18.4
$4.50 to $6.49	18.1	25.4	23.6	24.7	22.8	17.9
$6.50 and over	19.7	30.3	11.1	17.4	16.3	13.3
FEMALES (INCLUSIVE OF CONFINEMENT CASES).						
All incomes	26.0	35.9	26.6	24.6	19.9	18.1
Under $4.50	30.3	45.6	37.1	28.6	14.2	19.5
$4.50 to $6.49	19.7	26.8	25.7	27.2	23.5	17.9
$6.50 and over	23.5	31.1	12.6	17.6	16.3	14.4

[1] Adjusted to a standard age distribution. [2] Excluding disability due to confinements.

It may be noted that the marked rise in the prevalence of sickness during May, which has been commented upon, is characteristic of each of the three income classes.

By the same method we have already employed, the average number of days of disabling sickness per year per person has been estimated for persons of different sexes and incomes, after adjusting to a standard age distribution. The results are shown in Figure 2.

Persons in the lowest income group were affected, on the average, by disabling sickness a little more than twice as much as those of the highest income group, and family income seems to be more highly correlated with sickness in the case of males than in the case of females. It will be noticed that the total disability for women appeared to be slightly higher than for men in the two upper income classes, while in the lowest income class exactly the reverse is true. A partial explanation of this fact perhaps is that women of the poorest

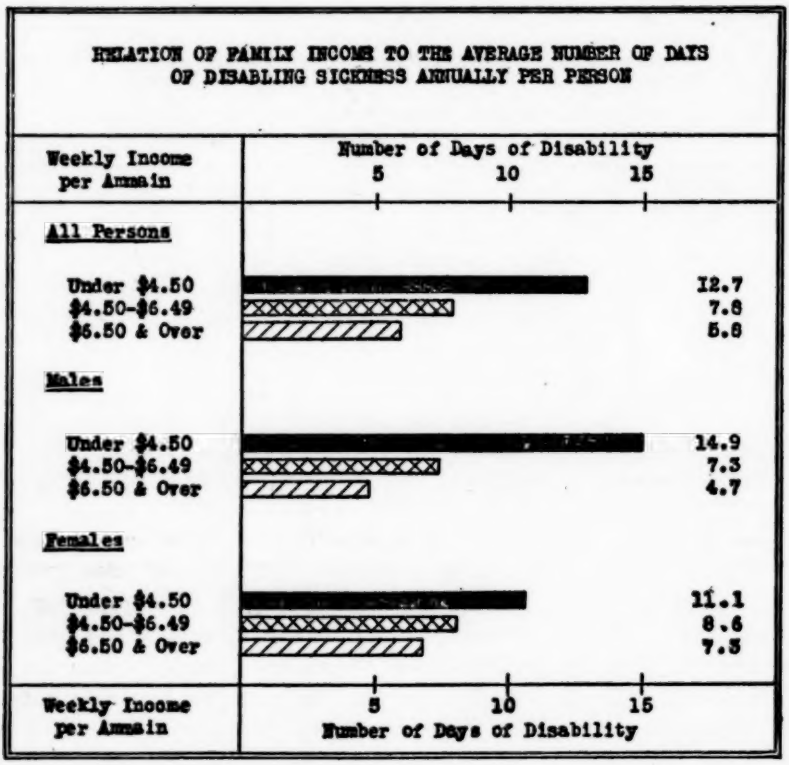


FIG. 2.

class were most likely to be up and attending to their housework and millwork even when ill, and therefore the enumerators failed to report some of the actual sickness among this class. In the 1916 study of a similar group of people, it was practicable for the enumerator to spend more time with each family, a better judgment of each case was thus rendered possible, and the results show the sickness rate for women to be higher than for men in both the low and the high income classes. In all probability the disability rate reported in 1917 is too low for women.

TABLE 6.—*Average number of days annually of disabling sickness by age, sex, and family income for persons residing in 24 cotton mill villages of South Carolina in 1917.*[1]

Age group.	Average days of disability for persons of specified weekly family income per ammain.		
	Less than $4.50.	$4.50 to $6.49.	$6.50 and over.
ALL PERSONS.			
Under 5 years	10.1	5.5	6.8
5–14	4.5	2.5	2.9
15–24	10.6	6.7	5.3
25–44	12.6	7.6	5.7
45 and over	25.2	15.3	8.8
MALES.			
Under 5 years	11.0	6.3	5.5
5–14	4.8	2.4	2.9
15–24	8.1	6.3	4.0
25–44	14.7	5.4	3.4
45 and over	33.4	16.1	9.2
FEMALES (EXCLUSIVE OF CONFINEMENT).			
Under 5 years	9.2	4.8	8.3
5–14	4.1	2.8	2.9
15–24	12.6	7.0	6.5
25–44	10.5	9.9	8.3
45 and over	16.5	14.5	8.4

[1] Annual days of disabling sickness is based on successive canvasses in different villages, at which time the number of persons ill at time of visit was recorded.

The relation of family income to disabling sickness among persons of different ages is shown in Table 6. The income classification used in Table 5 is followed, the same method of computing the average annual days of disability per person was employed, and the individuals were grouped into five broad age groups in order to include a large enough number in each group to give a fair amount of regularity in the results. The indications obtained from Table 6 are consistent in that for all age groups the average number of days of disability per person was greater for persons of low income than for persons of relatively high income.

3. DURATION OF ILLNESSES ACCORDING TO SEASON, INCOME, AND AGE.

Some idea of the duration of disabling sickness may be gained by utilizing the records of the length of time between the onset of sickness up to and including the date the household was visited. Obviously the record can not be an exact one from the point of view of the total length of each illness recorded, since the record is a "cross-section" of the illness as it prevailed at the time of the canvass; but upon the assumption that, on the average, the cross-section was taken at the middle of the period of illness.

The following summary shows the prevalence rates and percentage distribution of illness according to convenient duration classes:

TABLE 7.—*Distribution of illnesses observed among the population of several cotton-mill villages in South Carolina in 1917 according to duration, and rate per 1,000 observations.*

Duration of illness from onset up to and including date of record.	Number of illnesses.	Rate per 1,000.[1]	Per cent.
All durations	1,210	22.0	100.0
Less than 1 week	397	7.2	32.8
1 week but less than 2 weeks	152	2.8	12.6
2 weeks but less than 2 months	280	5.1	23.1
2 months or longer	381	6.9	31.5

[1] Per 1,000 observations, a total of 55,067 observations having been made.

Roughly a third of the illnesses were less than one week in duration, another third one week but less than two months, and another third had lasted two months or longer. The number and proportion of illnesses which had lasted two months or more are undoubtedly too large, however, since to some extent the same chronic cases, or cases of quite long duration, were recorded more than once. There is, therefore, a slight accumulation of records of the same cases which would tend to smooth out certain possible seasonal variations in the rates, on the one hand, and, on the other hand, to swell the total number of these cases unduly. This fault in the data must, of course, be kept in mind in making specific interpretations.

In spite of the shortcomings of the material, however, it is possible to make certain comparisons from the point of view of the length of illness in relation to the age of persons afflicted, their economic status, and, roughly, the season of the year. In Table 8, the prevalence of sickness is classified according to the four durations already given for each of the four general periods and expressed as a rate per 1,000 persons observed.

TABLE 8.—*Seasonal variation in the illnesses of different durations as determined by several canvasses in 24 cotton-mill villages in South Carolina, 1917.*

Duration to date of visit.	Period of canvass.			
	Apr. 2–May 5 (Pop., 12,909).	May 7–June 9 (Pop., 9,987).	June 18–Aug. 18 (Pop., 21,627).	Oct. 8–Dec. 22 (Pop., 10,544).
NUMBER OF ILLNESSES OF SPECIFIED DURATION.				
Any duration	290	316	444	160
Under 1 week	118	118	135	26
1 week, under 2 weeks	34	46	51	21
2 weeks, under 2 months	48	83	112	37
2 months or longer	90	69	146	76
RATE PER 1,000 PERSONS.				
Any duration	22.5	31.6	20.5	15.2
Under 1 week	9.2	11.8	6.2	2.5
1 week, under 2 weeks	2.6	4.6	2.4	2.0
2 weeks, under 2 months	3.7	8.3	5.2	3.5
2 months or longer	7.0	6.9	6.8	7.2

It is evident that the duration of sickness, within the limitations of the data, indicates in a general way the severity of the attack, very roughly in the following manner: Illnesses of less than one week, which may be termed *slight*; of one week but under two months,

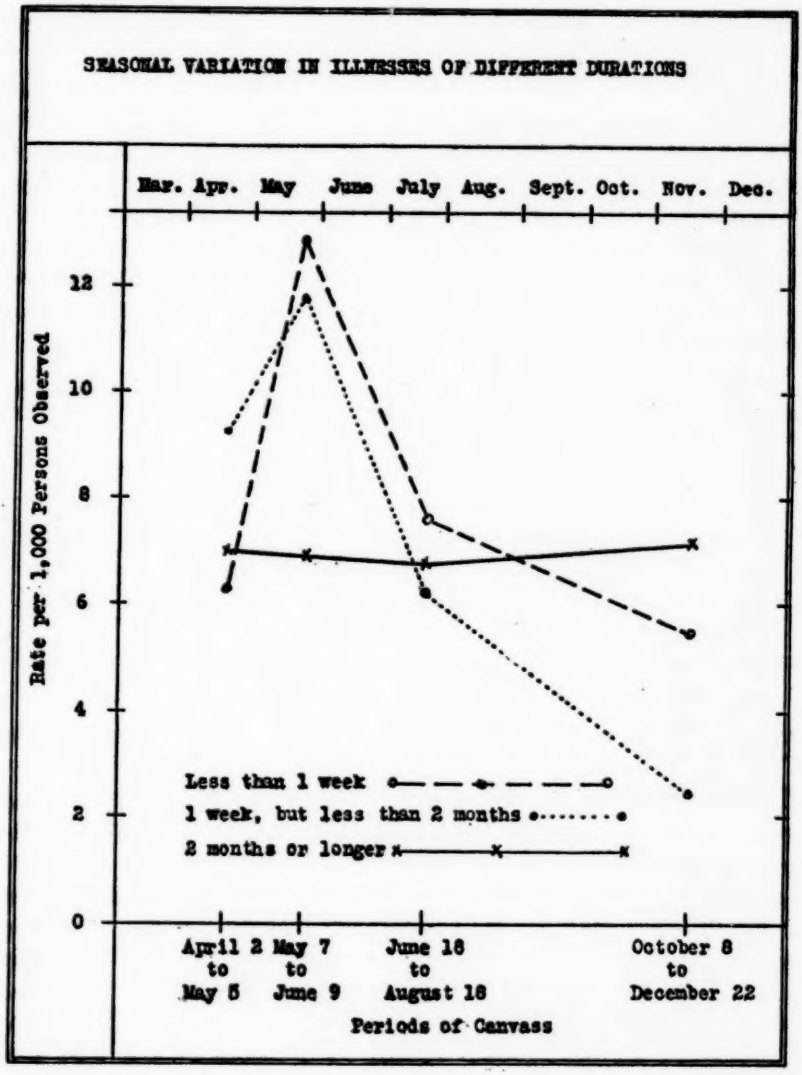


FIG. 3.

severe; and of two months or more, more or less *chronic.* In Figure 3 the prevalence of illnesses so classified has been plotted for the four periods. While the curves can not be assumed to show in detail the seasonal variation of any of the three durations or degrees of severity, since only four points in the calendar are given, they

indicate, as one may expect, (1) that the incidence of illnesses of long duration varied very slightly during the year, and (2) that illnesses of short duration, especially those which had lasted less than a week up to the time the household was visited, showed a quite marked variation. A definite rise in April–May, a high peak in May–June, and a marked decline for the two later periods are evident.

The prevalence rates of illnesses of different durations when the observed persons are classified according to weekly family income do not suggest any significant differences for short illnesses from the point of view of economic status. On the other hand, differences are clearly manifested for illnesses which had lasted as long as two weeks but under two months (which we may roughly term *severe* illnesses) and are considerably greater, even, for illnesses which had lasted two months or longer (or, roughly, chronic cases). The rates are given in Table 9.

TABLE 9.—*Frequency of disabling sickness of different durations among persons classified according to family income in several cotton-mill villages of South Carolina, 1917.*[a]

Duration from onset of illness through date of record.	Rate per 1,000 persons classified according to weekly family income per ammain.		
	Less than $5.00.	$5.00 to $6.49.	$6.50 or more.
Less than 1 week	7.8	6.4	7.2
1 week but less than 2 weeks	3.5	2.1	2.3
2 weeks but less than 2 months	7.4	3.7	3.0
2 months or longer	9.7	5.5	3.2

[a] The use, in this table and Table 10, of a slightly different lowest income class from that used in the other tables ("less than $5.00" instead of "less than $4.50") has no significance.

This fact may be interpreted in quite a general way by saying that persons of all incomes in the population studied were affected by slight illnesses to about the same extent, but those in the lower income classes were affected in a much greater degree by severe and chronic illnesses than those in the higher income classes. This general statement, however, may be considered true only for the entire period of observation and for persons of all ages, sexes, and other conditions. Quite different results might be found were it possible to subdivide the individuals within each income class, and their incident illnesses, according to duration as well as income, into sex, age, or other groups, and to consider these various classes separately for each canvass period. Unfortunately the data were not found to be adequate for so manifold a tabulation. We have, however, prepared a manifold tabulation by income, duration, and period (roughly, season of the year) from which prevalence rates have been computed.

These data are given in Table 10, and the rates have been plotted as graphs in Figure 4.

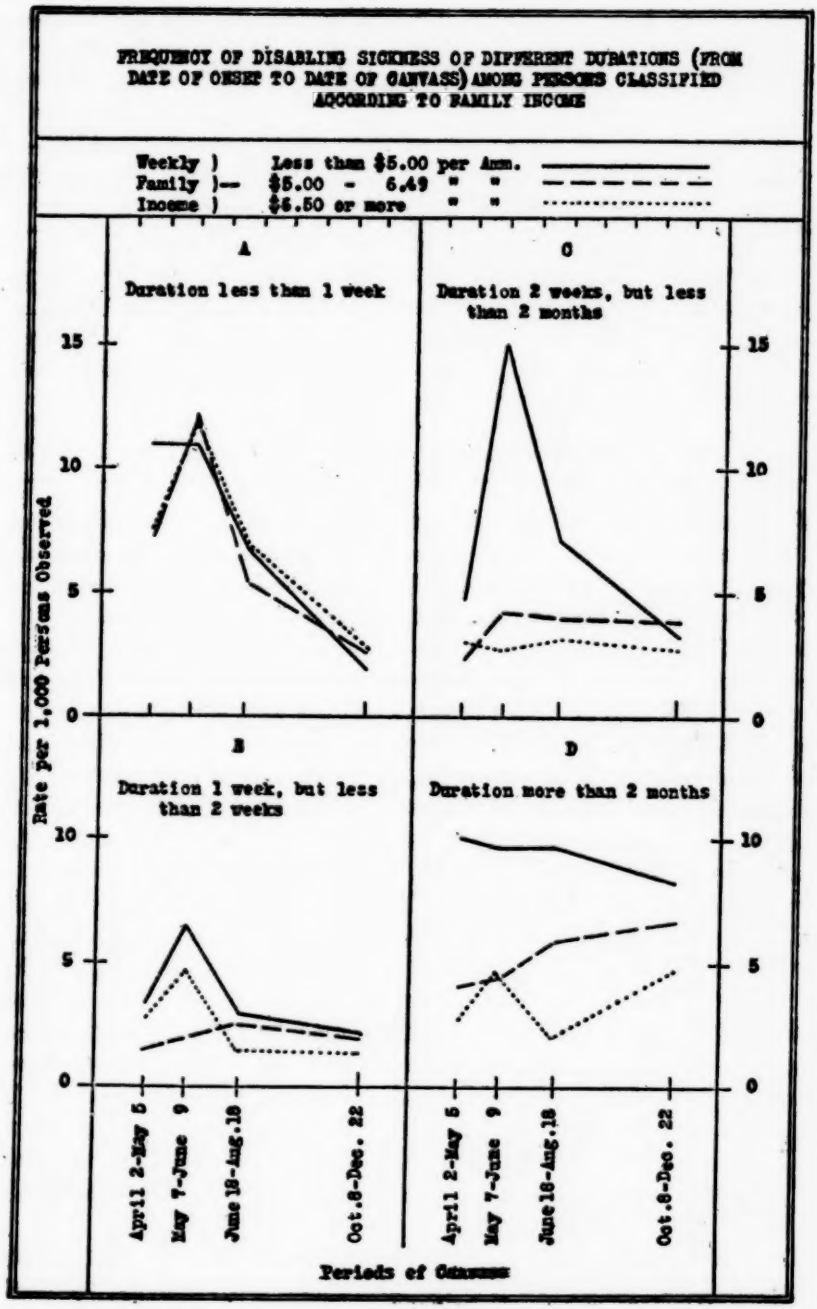


FIG. 4.

TABLE 10.—*Frequency of disabling sicknesses of different durations among persons of different incomes at each of four periods, in several cotton-mill villages of South Carolina, in 1917.*

Date of visit.	Weekly family income per ammain.	Rate per 1,000 persons for cases of specified duration.				
		Any duration.	Under 1 week.	1 week but under 2 weeks.	2 weeks but under 2 months.	2 months or onger.
Apr. 2 to May 5	$5.00 or less	29.2	11.0	3.4	4.8	10.1
	$5.00 to $6.49	15.2	7.2	1.5	2.4	4.1
	$6.50 and over	15.9	7.5	2.7	3.1	2.7
May 7 to June 9	$5.00 or less	42.2	11.0	6.4	15.1	9.7
	$5.00 to $6.49	22.6	12.1	1.9	4.3	4.3
	$6.50 and over	23.8	11.7	4.7	2.8	4.7
June 18 to Aug. 18	$5.00 or less	26.6	6.7	2.9	7.3	9.7
	$5.00 to $6.49	18.0	5.4	2.5	4.1	6.0
	$6.50 and over	13.8	7.0	1.5	3.2	2.1
Oct. 8 to Dec. 22	$5.00 or less	15.8	1.9	2.2	3.3	8.3
	$5.00 to 6.49	15.3	2.6	2.0	3.9	6.8
	$6.50 and over	11.7	2.8	1.4	2.8	4.7

While the number of observations upon which each rate is based has been reduced considerably by subdividing the total observations into 48 categories, and the probable errors are large, the *consistency* of the results in certain particulars is worth consideration. In Figure 4A it is again quite evident that income has little, if any, effect upon the rate of prevalence of brief illnesses at any period shown. In Figures 4B and 4C, however, the May–June wave in the rate of illnesses of longer duration, particularly those lasting two weeks and as long as two months, is associated almost exclusively with low income, no very consistent variations being apparent for persons of the relatively higher incomes. In Figure 4D the wide divergence of the prevalence rates for illnesses of long duration is shown between the lower and the higher income classes at all periods, as was also clearly manifested in Figure 4C and suggested in Figure 4B for the early part of the year. Further refinements in our analysis are perhaps unwarranted by the data. The general statement based on Table II, therefore, may be put into more exact language by saying that persons in each of the income classes were affected by slight illnesses to about the same extent, but persons with relatively low incomes were affected in a much greater degree than the economically better-off by severe illnesses *in the late spring and early summer* and by even more severe or chronic illnesses at all times.

This observation, however, throws some light upon the very interesting question which has already been mentioned, namely, whether or not low economic status is in itself responsible for a high sickness

incidence. The fact that the differences in the rate of sickness among persons of different family incomes are seen chiefly for severe and chronic illnesses would at once appear to add to the arguments against low economic status as a causative factor and in favor of the hypothesis that a low constitutional resistance to disease is the

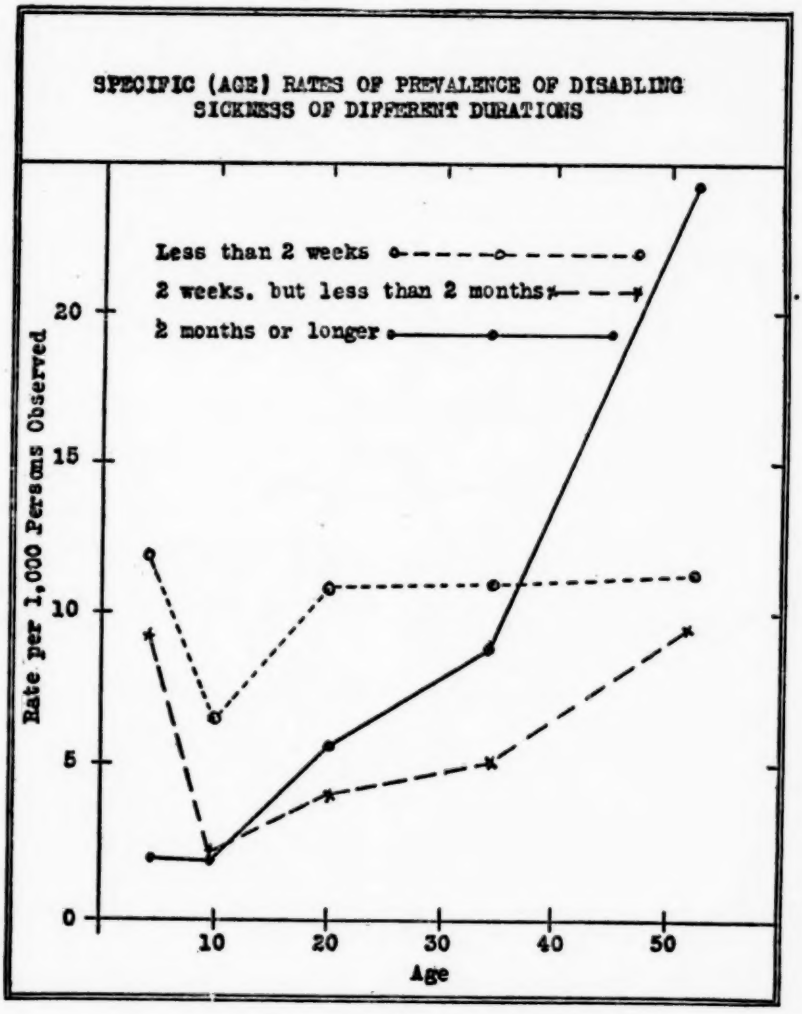


FIG. 5.

only factor. But if we analyze the data a little further we discover that the lowest income class suffered from serious illnesses (one week but less than two months in duration) to a greater degree than other income classes chiefly at *a specific season* of the year, and the suggestion is afforded that in this instance, at least, some specific condition

which was associated definitely with income caused a difference in the rate.[8]

A classification of the illnesses by duration and age shows that the age curves for short, severe, and long (chronic) illnesses were quite different. The curves have been plotted in Figure 5. The principal observation which suggests itself is the marked tendency for the severe and chronic illnesses to rise as age advances. The curve for short illnesses presents a marked contrast to that for long (chronic) cases, the latter, excepting the ages under 10, being similar to the usual mortality curve, and the former presenting an entirely different age incidence. Our data do not, of course, allow us to carry this interesting inquiry further into specific diagnoses.

TABLE 11.—*Specific (age) rates of prevalence of disabling sickness of different durations in the population of several cotton mill villages in South Carolina, 1917.*

Age period (years).	Duration.				
	Any duration.	Less than 1 week.	1 week but less than 2 weeks.	2 weeks but less than 2 months.	2 months or longer.
NUMBER OF ILLNESSES.					
Under 5	185	64	32	74	15
5–14	145	76	17	28	24
15–24	267	97	41	47	82
25–44	345	117	37	74	117
45 and older	266	43	24	57	142
RATE PER 1,000 PERSONS.					
Under 5	22.4	7.8	3.9	9.0	1.8
5–14	10.1	5.3	1.2	1.9	1.7
15–24	21.2	7.7	3.3	3.7	6.5
25–44	24.8	8.4	2.7	5.3	8.4
45 and older	45.1	7.3	4.1	9.7	24.0

In view of the rather unusually high prevalence of sickness in the late spring, which, as we have already pointed out, occurred among persons of relatively low economic status (Fig. 4), a comparison of the durations of illness at different ages prevalent in the late spring with those prevalent in the late autumn suggested itself. This comparison is given in Table 12 and is graphically shown in Figure 6.

[8] In the third paper of this series, certain probably unusual features of the wave of illness in the spring and early summer will be discussed in connection with more detailed and continuous records for a single village during 1918.

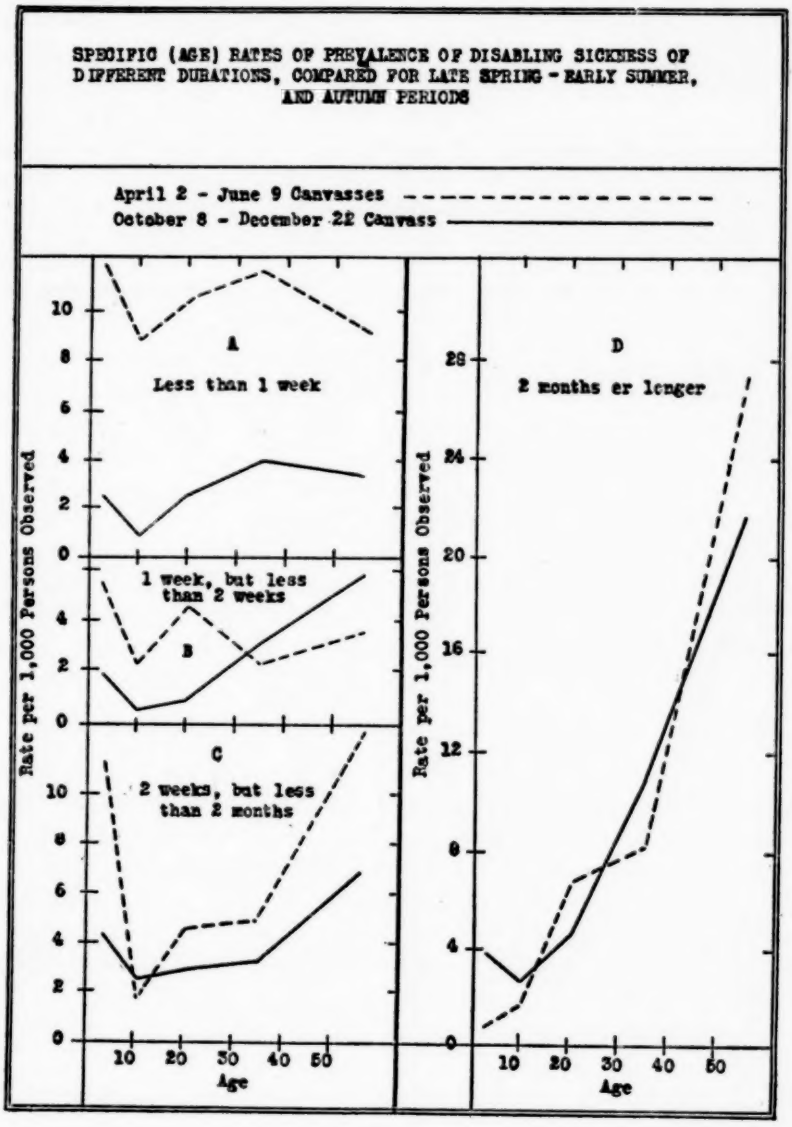

SPECIFIC (AGE) RATES OF PREVALENCE OF DISABLING SICKNESS OF DIFFERENT DURATIONS, COMPARED FOR LATE SPRING - EARLY SUMMER, AND AUTUMN PERIODS
April 2 - June 9 Canvasses
October 8 - December 22 Canvass
A
Less than 1 week
B
1 week, but less than 2 weeks
C
2 weeks, but less than 2 months
D
2 months or longer
Rate per 1,000 Persons Observed
Age
10
20
30
40
50
0
2
4
6
8
12
16
20
24
28

FIG. 6.

TABLE 12.—*Specific (age) rates of prevalence of disabling sickness of different durations in the population of several cotton mill villages in South Carolina, 1917, compared for late spring, early summer, and autumn periods.*

Age period (years).	Rate per 1,000 persons for cases of specified duration.							
	Less than 1 week.		1 week but under 2 weeks.		2 weeks but under 2 months.		2 months or longer.	
	Apr. 2 to June 9.	Oct. 8 to Dec. 22.	Apr. 2 to June 9.	Oct. 8 to Dec. 22.	Apr. 2 to June 9.	Oct. 8 to Dec. 22.	Apr. 2 to June 9.	Oct. 8 to Dec. 22.
Under 5	11.9	2.4	5.6	1.8	11.3	4.3	0.9	3.7
5–14	8.6	.7	2.3	.4	1.7	2.5	1.5	2.5
15–24	10.4	2.5	4.6	.8	4.6	2.9	6.7	4.5
25–44	11.6	3.9	2.4	3.2	4.9	3.2	8.0	10.7
45 or older	9.1	3.4	3.7	6.0	12.4	6.9	27.0	21.5

Marked differences in the age curves for sicknesses prevailing in the two seasons are indicated for all except illnesses of a more or less chronic type (having lasted two months or longer). Aside from the higher rate per 1,000 persons observed in the late spring, the most interesting difference is the shape of the curves. For illnesses of less than one week in duration up to the day of visit, the age curves are again very similar. For more serious illnesses (i. e., those having had a duration of one week but less than two weeks) the rate of prevalence was high in the younger ages, particularly in the age period 15–24, in the late spring as compared with the late autumn. The incidence of some specific disease is suggested, such as pellagra, which is prevalent at this season and among persons of this age group.

II. Sickness and Absenteeism of Mill Workers, January–December, 1917.

In addition to the records which were made of sickness prevailing among the population of the several cotton mill villages, a record was made of the number of days lost from work and the cause (i. e., whether sickness or personal reasons) was obtained for the two months immediately preceding the enumerator's visit. These data have been tabulated in Table 13, which shows the per cent of time lost on account of sickness and all causes in each month by men and women workers.

TABLE 13.—*Per cent of total possible working days lost from all causes and from disabling sickness in each month of 1917 by wage earners in cotton mills of South Carolina.*

Month.	Number of wage earners recorded.	Per cent of possible working days lost.		Per cent of total days of absence due to sickness.
		From causes other than sickness.	From sickness.	
MALES.				
January	5,019	6.7	2.8	20.6
February	5,036	7.6	3.6	31.8
March	5,034	6.9	3.2	32.2
April	4,822	6.1	4.1	40.4
May	4,453	5.8	3.6	38.7
June	3,541	5.7	4.0	40.8
July	1,974	7.6	2.9	27.3
August	1,129	6.3	2.2	25.7
September	1,092	6.2	2.4	28.3
October	960	5.2	1.6	22.9
FEMALES.				
January	2,203	10.4	3.2	23.5
February	2,213	11.0	4.6	29.4
March	2,218	9.9	4.7	32.0
April	2,124	9.8	4.2	29.8
May	1,923	9.7	4.2	30.1
June	1,490	10.3	3.9	27.8
July	839	10.4	2.8	21.4
August	464	9.0	1.8	17.0
September	450	8.9	2.2	19.6
October	381	8.3	2.9	25.6

The monthly variation in the time lost is graphically shown in Figure 7. The peak of absenteeism occurred in February for both men and women; and although the time lost because of sickness was high in this month, absenteeism was due more to causes other than sickness. There was an abrupt drop in time lost in July, and it continued low through October, and the proportion of absenteeism due to sickness was at a minimum during the late summer and early fall months.

The percentage of time lost by employees of these cotton mills is about twice as high as the average that was reported for an Eastern manufacturing plant in 1919.[9] The average for men and women at this plant was 5.65 per cent monthly. For the cotton-mill employees in every month except one the per cent of time lost was higher than the highest monthly per cent (7.69) in the manufacturing plant.

[9] See Public Health Reports, Sept. 10, 1920, or Reprint No. 611.

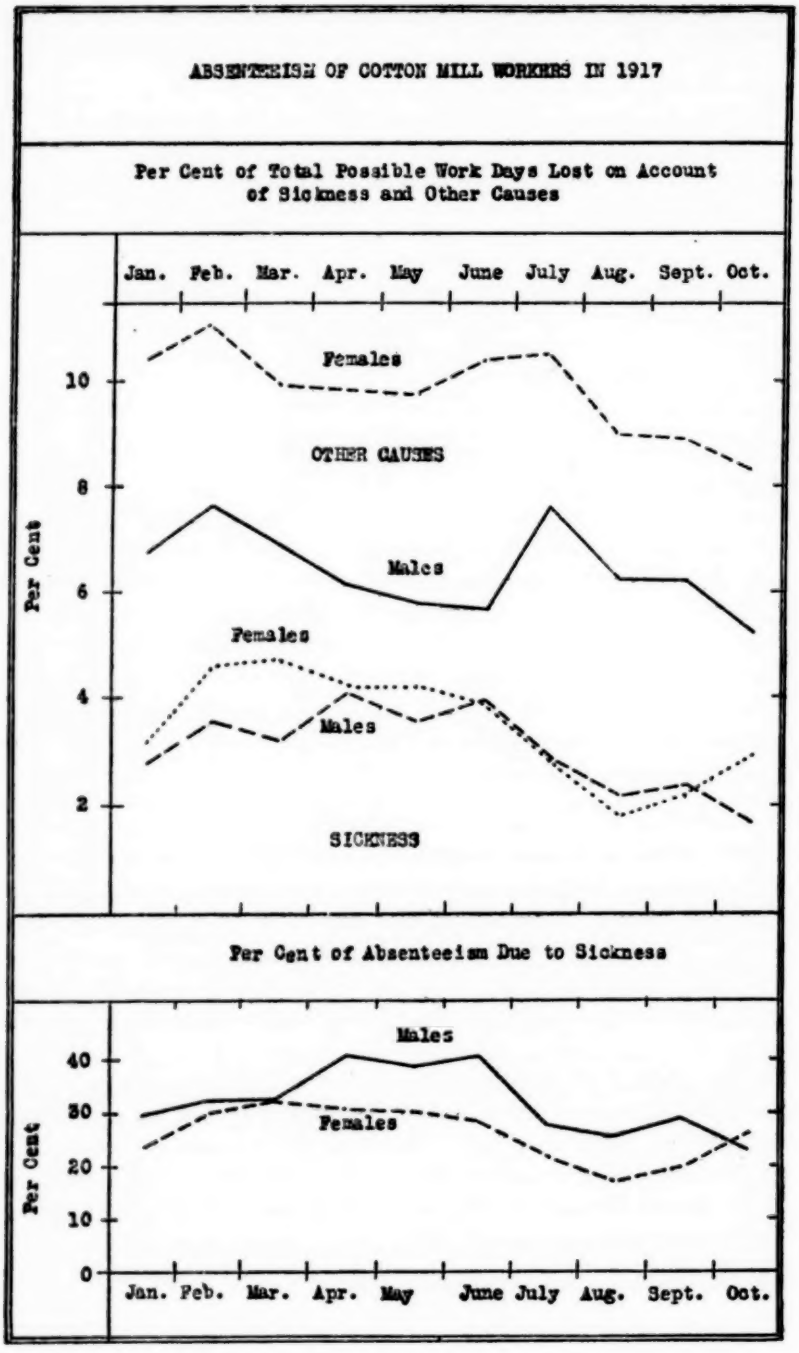

ABSENTEEISM OF COTTON MILL WORKERS IN 1917
Per Cent of Total Possible Work Days Lost on Account of Sickness and Other Causes
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct.
Per Cent
10
8
6
4
2
Females
OTHER CAUSES
Males
Females
Males
SICKNESS
Per Cent of Absenteeism Due to Sickness
Males
Females
40
30
20
10
0
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct.

FIG. 7.

TABLE 14.—*Days lost from work by male and female earners in 24 cotton mills of South Carolina. Classified according to cause, family income, and month of the year.*[1]

Month of the year (1917).	Annual days lost on account of sickness by persons of specified income.				Annual days lost on account of personal reasons by persons of specified income.			
	All incomes.	$4.49 or less.	$4.50–$6.49	$6.50 and over.	All incomes.	$4.49 or less.	$4.50–$6.49.	$6.50 and over.
MALES.								
January	8.7	12.2	7.8	6.0	20.8	21.8	20.7	19.6
February	11.1	15.6	9.0	8.6	23.7	23.3	25.4	21.2
March	10.0	14.8	8.0	7.0	21.2	22.0	21.8	19.1
April	12.7	13.5	8.5	6.8	18.8	23.4	22.4	19.2
May	11.3	16.1	7.3	5.9	17.8	20.9	19.7	16.9
June	12.3	15.7	9.0	5.5	17.8	23.9	19.7	17.5
July	8.9	14.7	6.4	6.8	23.7	25.7	23.8	22.3
August	6.8	12.4	4.8	1.7	19.5	17.5	18.4	27.0
September	7.5	12.6	6.2	2.5	19.1	20.0	18.5	17.8
October	4.8	4.9	4.8	4.5	16.3	17.3	14.8	16.8
All 10 months	9.4	13.2	7.2	5.5	19.8	21.5	20.5	19.7
FEMALES.								
January	9.9	12.8	9.2	8.6	32.1	29.2	31.5	34.5
February	14.2	21.4	11.4	11.8	34.1	32.9	32.6	36.1
March	14.5	21.4	14.1	10.0	30.7	30.1	29.9	31.9
April	12.9	18.3	12.5	9.7	30.5	32.6	26.6	33.2
May	12.9	19.5	12.4	9.0	30.1	32.2	28.2	30.9
June	12.2	20.3	11.6	8.1	31.8	31.9	31.0	33.2
July	8.8	14.1	5.6	8.6	32.3	33.1	29.5	35.4
August	5.7	7.7	3.6	5.8	27.9	26.1	27.7	31.4
September	6.7	8.0	4.7	7.2	27.8	22.9	28.9	25.5
October	8.9	12.0	7.4	3.6	25.7	24.0	26.7	23.0
All 10 months	10.6	15.5	9.3	8.2	30.2	29.4	29.2	31.4

[1] Number of persons of record and total days absent from work in each month will be found in Table E of the Appendix.

Women lost a little more time than men because of sickness and about 50 per cent more time than men for personal reasons. No vacations and very few holidays were allowed on pay.

The relation of income to time lost on account of sickness is brought out in Table 14, which gives the average number of days lost per person, all persons being classified according to their family income. Wage earners of low family income lost, on the average, about twice as many days as those of high incomes. Absenteeism for personal reasons does not show any association with the family income.

SUMMARY.

1. In connection with a study of pellagra in 24 cotton mill villages of South Carolina during 1917, records were made of the number of persons in the mill workers' households who were found to be disabled on account of sickness on the day each household was visited. The population was enumerated with distinction as to sex, age, and family income, and the duration of illness up to and including the day of visit was recorded. In all, 55,067 observations regarding illness were made in 24 villages, with a population of approximately 22,000 persons, and 1,241 cases of disabling illness were recorded during the course of the various canvasses, which were commenced on April 2 and discontinued on December 22.

2. The prevalence rate for disabling sickness was found to vary from 18.1 to 36.5 per 1,000 according to season of the year. An annual average of the number of days of disabling sickness per person was indicated to be 9.3 for all persons. A definite wave of disabling sickness appeared in the late spring and early summer.

3. The usual age curve of morbidity was found, but it appeared that the excess of the female disability rate, after excluding confinements, occurred in a specific season of the year, namely, May–August, which, it is pointed out, is the period of high pellagra prevalence.

4. The conclusions suggested by a previous study (1916) regarding the inverse correlation of the disabling illness and family income were further confirmed by the larger study (1917) for persons of both sexes, all ages, and for practically all seasons of the year.

5. When illnesses were classified according to duration (prior to and including the day of record) in such a way as to indicate roughly the severity of illness, it appeared that chronic illness varied but slightly during the year, while illnesses of short duration showed a marked variation, a definite peak occurring in May–June. The incidence (as indicated) of severe illnesses was in inverse relationship to family income, but no significant differences of this nature were shown for illness of short duration. The incidence of serious illnesses, however, in the late spring and early summer was greater among those whose income was relatively low than among the better off. These severe illnesses of late spring occurred relatively more frequently in the age period 15–24.

6. A record was also kept of the number of days not at work for wage earners during 1917. The peak of absenteeism occurred in February for both men and women in the cotton mills. Absence from work on account of sickness was highest during the spring and early summer, and relatively highest, as compared with absences from other causes, during the late spring–early summer period, thus reflecting the prevalence of sickness as shown by records of canvasses.

APPENDIX.

TABLE A.—*Cases of disabling sickness and rate per 1,000 persons as ascertained by a series of canvasses made in cotton-mill villages in South Carolina during the year 1917.*

Family income per annum per week.	Total number canvassed from—						Number found disabled on day of canvass.						Disability rate per 1,000 persons.					
	Apr. 2 to May 5	May 7 to June 9	June 18 to July 14	July 16 to Aug. 18	Oct. 8 to Oct. 27	Nov. 26 to Dec. 22	Apr. 2 to May 5	May 7 to June 9	June 18 to July 14	July 16 to Aug. 18	Oct. 8 to Oct. 27	Nov. 26 to Dec. 22	Apr. 2 to May 5	May 7 to June 9	June 18 to July 14	July 16 to Aug. 18	Oct. 8 to Oct. 27	Nov. 26 to Dec. 22
ALL PERSONS.																		
All incomes [1]	12,909	9,987	9,999	11,628	5,206	5,338	293	319	236	231	83	79	22.7	32.0	23.6	19.9	15.9	14.8
Under $4.50	5,644	3,910	3,854	4,203	1,635	1,966	168	166	127	102	24	34	29.8	42.5	33.0	24.3	14.7	17.3
$4.50–$6.49	4,604	3,715	3,944	4,570	2,361	2,263	70	84	79	82	40	32	15.2	22.6	20.0	17.9	16.9	14.5
$6.50 and over	2,259	2,145	2,018	2,684	1,068	1,074	36	51	22	43	14	11	15.9	23.8	10.9	16.0	13.1	10.2
MALES.																		
All incomes	6,340	4,937	4,844	5,795	2,604	2,667	144	160	118	101	43	40	22.7	32.4	24.4	17.4	16.5	15.0
Under $4.50	2,782	1,968	1,904	2,083	851	996	92	93	68	46	18	20	33.1	47.2	35.7	22.1	21.1	20.1
$4.50–$6.49	2,265	1,839	1,903	2,282	1,175	1,112	31	41	36	33	18	16	13.7	22.3	18.9	14.5	15.3	14.4
$6.50 and over	1,105	1,035	958	1,335	595	514	13	19	10	20	4	4	11.8	18.4	10.4	15.0	7.9	7.8
FEMALES (EXCLUDING DISABILITY DUE TO CONFINEMENT).																		
All incomes	6,569	5,050	5,155	5,833	2,602	2,671	149	159	118	130	40	39	22.7	31.5	22.9	22.3	15.4	14.6
Under $4.50	2,862	1,942	1,950	2,120	784	970	76	73	59	56	6	14	26.6	37.6	30.3	26.4	7.7	14.4
$4.50–$6.49	2,339	1,876	2,041	2,288	1,186	1,091	39	43	43	49	22	16	16.7	22.9	21.1	21.4	18.6	14.7
$6.50 and over	1,154	1,110	1,060	1,349	563	560	23	32	12	23	10	7	19.9	28.8	11.3	17.0	17.8	12.5
FEMALES (INCLUDING DISABILITY DUE TO CONFINEMENT).																		
All incomes	6,583	5,058	5,165	5,840	2,606	2,673	163	167	128	137	44	41	24.7	33.0	24.8	23.5	16.9	15.3
Under $4.50	2,867	1,944	1,953	2,120	787	971	81	75	62	56	9	15	28.3	38.6	31.7	26.4	11.4	15.5
$4.50–$6.49	2,343	1,879	2,045	2,294	1,187	1,091	43	46	47	55	23	16	18.3	24.5	23.0	24.0	19.4	14.7
$6.50 and over	1,159	1,111	1,062	1,350	563	561	28	33	14	24	10	8	24.2	29.7	13.2	17.8	17.8	14.3

[1] Includes persons of unknown income; therefore not the sum of the three income groups.

TABLE B.—*Number of persons canvassed and number found disabled on day of visit, classified by four periods of the year and by five age periods.*

Age group (years)	Total number canvassed during—				Number disabled on day of visit.			
	April 2 to May 5.	May 7 to June 9.	June 18 to Aug. 18.	Oct. 8 to Dec. 22.	April 2 to May 5.	May 7 to June 9.	June 18 to Aug. 18.	Oct. 8 to Dec. 22.
ALL PERSONS.								
Under 5	1,872	1,500	3,239	1,636	41	59	65	19
5–14	3,428	2,598	5,612	2,791	41	44	45	18
15–24	2,907	2,301	4,970	2,423	69	69	110	26
25–44	3,303	2,575	5,477	2,531	82	77	141	55
45 or over	1,399	1,013	2,329	1,161	60	70	106	44
MALES.								
Under 5	977	739	1,676	880	16	39	33	11
5–14	1,710	1,354	2,832	1,436	20	21	25	11
15–24	1,335	1,013	2,262	1,116	30	28	34	11
25–44	1,636	1,292	2,708	1,251	40	30	57	29
45 or over	682	519	1,161	588	38	42	70	21
FEMALES.								
Under 5	895	741	1,563	758	25	20	32	8
5–14	1,718	1,244	2,780	1,355	21	23	20	7
15–24	1,572	1,288	2,708	1,307	39	41	76	15
25–44	1,667	1,283	2,769	1,280	42	47	84	26
45 or over	717	494	1,168	573	22	28	36	23

TABLE C.—*Age distribution of the populations canvassed at various periods of 1917 for morbidity prevalence and of the total population of continental United States in 1910.*

Age group.	Per cent of total persons in each age group.						
	April 2 to May 5.	May 7 to June 9.	June 18 to July 14.	July 16 to Aug. 18	Oct. 8 to Oct. 28.	Nov. 26 to Dec. 22.	Continental United States, 1910.
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 5 years	14.5	15.0	14.6	15.3	15.4	15.7	11.6
5–9	14.6	14.1	14.4	13.9	14.4	14.3	10.6
10–14	11.9	11.9	12.0	11.7	12.1	12.1	9.9
15–24	22.5	23.0	22.5	23.4	22.7	23.2	19.7
25–34	15.4	15.7	14.9	15.4	14.1	13.4	16.5
35–44	10.2	10.1	10.2	10.2	10.2	10.3	12.7
45–54	5.6	5.3	5.9	5.4	5.5	5.3	9.1
55 and over	5.2	4.8	5.6	4.8	5.6	5.6	9.8

TABLE D.—*Rate per 1,000 for cases of different durations for persons of various ages at each of four periods during 1917 in 24 cotton mill villages in South Carolina.*

Date of visit.	Age group (years).	Total persons of record.	Number of cases of specified duration.					Rate per 1,000 persons for cases of specified duration.				
			Any duration.	Under 1 week.	1 week but under 2 weeks.	2 weeks but under 2 months.	2 months or longer.	Any duration.	Under 1 week.	1 week but under 2 weeks.	2 weeks but under 2 months.	2 months or longer.
Apr. 2 to May 5.	Under 5	1,872	41	22	7	11	1	21.9	11.8	3.7	5.9	0.5
	5–14	3,428	41	28	6	2	5	12.0	8.2	1.7	0.6	1.5
	15–24	2,907	69	27	10	11	21	23.7	9.3	3.4	3.8	7.2
	25–44	3,303	82	31	8	13	30	24.8	9.4	2.4	3.9	9.1
	45 or over	1,399	57	10	3	11	33	40.7	7.1	2.1	7.9	23.6
May 7 to June 9.	Under 5	1,500	59	18	12	27	2	39.3	12.0	8.0	18.0	1.3
	5–14	2,598	44	24	8	8	4	16.9	9.2	3.1	3.1	1.5
	15–24	2,301	68	27	14	13	14	29.6	11.7	6.1	5.7	6.1
	25–44	2,575	76	37	6	16	17	29.5	14.4	2.3	6.2	6.6
	45 or over	1,013	69	12	6	19	32	68.1	11.8	5.9	18.8	31.6
June 18 to Aug. 18.	Under 5	3,239	65	20	10	29	6	20.1	6.2	3.1	9.0	1.9
	5–14	5,612	43	22	2	11	8	7.7	3.9	0.4	2.0	1.4
	15–24	4,970	104	37	15	16	36	20.9	7.4	3.0	3.2	7.2
	25–44	5,477	134	39	15	37	43	24.5	7.1	2.7	6.8	7.9
	45 or over	2,329	96	17	8	19	52	41.2	7.3	3.4	8.2	22.3
Oct. 8 to Dec. 22.	Under 5	1,638	20	4	3	7	6	12.2	2.4	1.8	4.3	3.7
	5–14	2,791	17	2	1	7	7	6.1	0.7	0.4	2.5	2.5
	15–24	2,423	26	6	2	7	11	10.7	2.5	0.8	2.9	4.5
	25–44	2,531	53	10	8	8	27	20.9	3.9	3.2	3.2	10.7
	45 or over	1,161	44	4	7	8	25	37.9	3.4	6.0	6.9	21.5

TABLE E.—*Number of persons of record and total days lost from work on account of sickness and other causes by male and female employees of cotton mills in South Carolina in 1917.*

Month.	Average weekly family income per annum.											
	All classes.			Under $4.50.			$4.50–$6.49.			$6.50 or more.		
	Number of persons recorded.	Days lost from—		Number of persons recorded.	Days lost from—		Number of persons recorded.	Days lost from—		Number of persons recorded.	Days lost from—	
		Sickness.	Other causes.		Sickness.	Other causes.		Sickness.	Other causes.		Sickness.	Other causes.
MALE WAGE EARNERS.												
January	5,019	3,821	9,109	1,555	1,648	2,962	2,063	1,406	3,723	1,223	636	2,086
February	5,036	4,313	9,247	1,564	1,889	2,823	2,066	1,447	4,071	1,228	821	2,018
March	5,034	4,401	9,282	1,566	2,016	3,004	2,062	1,429	3,922	1,225	746	2,035
April	4,822	4,936	7,314	1,468	1,601	2,773	1,986	1,363	3,586	1,191	652	1,843
May	4,453	4,368	6,911	1,353	1,895	2,467	1,836	1,167	3,150	1,098	565	1,621
June	3,541	3,646	5,279	991	1,305	1,985	1,483	1,116	2,453	921	424	1,351
July	1,974	1,415	3,775	550	650	1,141	811	419	1,554	475	261	856
August	1,129	664	1,920	333	360	508	466	193	748	197	30	464
September	1,092	663	1,684	324	330	523	451	226	673	185	37	206
October	960	405	1,363	289	124	435	400	168	516	160	63	234
FEMALE WAGE EARNERS.												
January	2,203	1,893	6,167	528	590	1,343	843	674	2,310	750	561	2,251
February	2,213	2,428	5,836	533	882	1,357	847	747	2,136	751	686	2,101
March	2,218	2,792	5,923	536	1,001	1,405	848	1,041	2,204	752	655	2,088
April	2,124	2,218	5,218	492	724	1,294	824	828	1,766	730	569	1,954
May	1,923	2,168	5,045	449	764	1,260	744	804	1,826	665	519	1,791
June	1,490	1,525	3,972	313	532	837	562	547	1,460	556	378	1,546
July	839	594	2,179	171	194	456	322	146	767	294	203	839
August	464	231	1,126	114	76	259	181	57	437	124	63	339
September	450	245	1,008	115	74	212	175	67	408	116	67	239
October	381	294	853	102	107	213	149	96	347	100	31	200

CITY HEALTH OFFICERS, 1924.

Directory of Those in Cities of 10,000 or More Population.

Directories of the city health officers in the cities of the United States having a population of 10,000 or more have been published in the Public Health Reports [1] for each year from 1916 to 1923, for the information of health officers and others interested in public health activities. These directories have been compiled from data furnished by the health officers. The cities included in this directory are those having 10,000 population or more on July 1, 1923, as estimated by the Bureau of the Census.

The asterisk (*) indicates that the officer so designated has been reported to be a "whole-time" health officer. For this purpose a "whole-time" officer is defined as "one who does not engage in the practice of medicine or in any other business, but devotes all his time to official duties."

City.	Name of health officer.	Official title.
Alabama:		
Anniston		
Bessemer		
Birmingham	*J. D. Dowling, M. D.	County health officer.
Dothan	*T. E. Tucker, M. D.	City and county health officer.
Florence	*W. D. Hubbard, M. D.	Field agent, U. S. P. H. S.
Gadsden	*Claude L. Murphree, M. D.	County health officer.
Mobile	*C. A. Mohr, M. D.	Do.
Montgomery	*J. L. Bowman, M. D.	Health officer, Montgomery County, unit No. 3.
Selma	*L. T. Lee, M. D.	County health officer.
Tuscaloosa	*Arthur A. Kirk, M. D.	City health officer.
Arizona:		
Douglas	Z. Causey, M. D.	Do.
Phoenix	L. D. Dameron, M. D.	Do.
Tucson	A. G. Schnabel, M. D.	Do.
Arkansas:		
Fort Smith		
Hot Springs		
Jonesboro	Walter C. Overstreet, M. D.	Do.
Little Rock	*William Leland Holt, M. D.	Do.
North Little Rock	V. L. Eason, M. D., P. H. D.	Do.
Pine Bluff	Wm. H. Blankenship, M. D.	Do.
California:		
Alameda	Arthur Hieronymus, M. D.	Health officer.
Alhambra	*Arthur S. Baker, M. D.	District health officer.
Bakersfield	P. J. Cuneo, M. D., LL. B.	Health commissioner.
Berkeley	Frank L. Kelly, M. D.	Health officer.
Chico	*C. E. Tovee	Chief of police.
Eureka	John W. Chain, M. D.	City physician and health officer.
Fresno		
Glendale	G. Kaemmerling, M. D.	Health officer.
Long Beach	*G. E. McDonald, M. D.	City health officer.
Los Angeles	*L. M. Powers, M. D.	Health commissioner.
Modesto	J. W. Morgan, M. D.	City health officer.
Oakland	H. E. Foster, M. D.	Health officer.
Pasadena	*Frank W. Hodgdon, jr., M. D.	City health officer.
Pomona	*Eugene F. Fontaine, M. D.	Deputy county health officer.
Richmond	Charles R. Blake, M. D.	Commissioner of health.
Riverside	W. B. Wells, M. D.	Health officer.
Sacramento	George J. Hall, M. D.	Do.
San Bernardino	C. C. Owen, M. D.	City health officer.
San Diego	Alex. M. Lesem, M. D.	Health officer and superintendent.
San Francisco	*William C. Hassler, M. D.	Health officer.
San Jose	Henry C. Brown, M. D.	Do.
Santa Ana	*W. Leland Mitchell, M. D.	County health officer.
Santa Barbara	*William H. Eaton, M. D.	Health officer.
Santa Cruz	Willis R. Congdon, M. D.	City health officer.
Santa Monica	A. C. Weaver, M. D.	City health physician.
Stockton	*John J. Sippy, M. D.	District health officer.
Vallejo	E. A. Peterson, M. D.	Health officer.
Venice	*I. L. Magee, M. D.	City health officer.

[1] Reprints Nos. 346, 416, 491, 539, 599, 702, 767, and 876 from the Public Health Reports.

City.	Name of health officer.	Official title.
Colorado:		
Boulder	J. H. Bush, M. D	Director of public health.
Colorado Springs	O. R. Gillett, M. D	Health officer.
Denver	*Geo. A. Collins	Manager of health and charity.
Greeley	Florence Fezer, M. D	City physician.
Pueblo	W. E. Buck, M. D	Chief, department of health, inspection, and sanitation.
Trinidad	Bernard M. Cowley, M. D	City health officer.
Connecticut:		
Ansonia	Frederick C. Goldstein, M. D	Health officer.
Bridgeport	*William Hall Coon, M. D	Do.
Bristol	Jos. J. Woisard, M. D	Do.
Danbury	Everett J. S. Scofield, M. D	Do.
Derby	Thomas F. Plunkett, M. D	Do.
East Hartford	Franklin H. Mayberry, M. D	Do.
Enfield	*Geo. F. Finch, M. D	Town health officer.
Fairfield	*Laurence E. Poole, M. D	Health officer.
Greenwich	Albert E. Austin, M. D	Do.
Groton	F. W. Hewes, M. D	Do.
Hartford	*C. P. Botsford, M. D	Superintendent of health.
Manchester	D. C. Y. Moor, M. D	Chairman, board of health.
Meriden	Joseph A. Cooke, M. D	Health officer.
Middletown		
Milford	Willis S. Putney, M. D	Town health officer.
Naugatuck		
New Britain	*R. W. Pullen, M. D	Superintendent of health.
New Haven	*John L. Rice, M. D	Health officer.
New London	*B. N. Pennell, D. V. S	Do.
Norwalk		
Norwich	Edward J. Brophy, M. D	Do.
Orange		
Shelton	Edward J. Finn, M. D	Do.
Stamford	*Raymond Fear, M. D	Commissioner of health.
Stonington	Charles F. Congdon, M. D.[1]	Town health officer.
Stratford	George F. Lewis, M. D	Do.
Torrington		
Wallingford	William J. Riordan, M. D	Health officer.
Waterbury	*Thomas J. Kilmartin, M. D	Do
West Hartford	R. W. E. Alcutt, M. D	Town health officer.
Willimantic	W. P. S. Keating, M. D	City health officer.
Windham	Frederick E. Wilcox, M. D	Town health officer.
Delaware:		
Wilmington	*Robert S. McBirney, M. D	Secretary, board of health.
District of Columbia:		
Washington	*William C. Fowler, M. D	Health officer.
Florida:		
Jacksonville	*William W. MacDonell, M. D	City health officer.
Key West	Eugene C. Lowe, M. D	Do.
Miami	*William T. Lanier, M. D	Chief health division.
Orlando	Sylvan McElroy, M. D	City physician.
Pensacola	Wm. H. Nobles, M. D	City health officer and physician.
St. Petersburg		
Tampa	*A. C. Hamblin, M. D	City health officer.
West Palm Beach	*Earle D. Clawson	Do.
Georgia:		
Albany	*Hugo Robinson, M. D	Commissioner of health.
Athens	*J. D. Applewhite, M. D	Do.
Atlanta	*J. P. Kennedy, M. D	City health officer.
Augusta	*Harry B. Nagle, M. D	Commissioner of health.
Brunswick	*H. L. Akridge, M. D	Health commissioner.
Columbus	*J. A. Thrash, M. D	Health officer
Lagrange	*C. S. Kinzer, M. D	Commissioner of health.
Macon	*Charles L. Ridley, M. D	Health officer.
Rome	*B. V. Elmore, M. D	Commissioner of health.
Savannah	*Victor H. Bassett, M. D	Health officer.
Valdosta	*Gordon T. Crozier, M. D	City health officer.
Waycross		
Idaho:		
Boise	*Robert H. Pratt	Health officer.
Pocatello		
Illinois:		
Alton	Daniel F. Duggan, M. D	Health commissioner.
Aurora	Geo. W. Haan, M. D	Do.
Belleville		
Berwyn	*H. L. Wright, M. D	Health director.
Bloomington	*Harold B. Wood, M. D	Do.
Blue Island	L. A. Burkhart	Health commissioner.
Cairo	B. S. Hutcheson, M. D	City physician.
Canton		
Centralia	J. W. Armstrong, M. D	Health officer.
Champaign	W. E. Schowengerdt, M. D	Do.
Chicago	*Hermann N. Bundesen, M. D	Commissioner of health.
Chicago Heights	G. F. Schreiber, M. D	Health commissioner

[1] Address, Mystic, Conn.

City.	Name of health officer	Official title.
Illinois—Continued.		
Cicero	Bret L. Vilna, M. D	Health commissioner.
Collinsville	R. H. Greaves, M. D	Health officer.
Danville	J. B. Hundley, M. D	Health commissioner.
Decatur	*Wm. Harding	Health officer.
East Moline	James P. Johnston, M. D	City physician.
East St. Louis	*John T. Connors	Commissioner of health.
Elgin	*A. L. Mann, M. D	City physician.
Evanston	C. T. Roome, M. D	Commissioner of health.
Forest Park	H. P. A. Carstens, M. D	Health commissioner.
Freeport	Robert J. Burns, M. D	Commissioner of health.
Galesburg	*E. M. Ellsworth	Health officer.
Granite	J. J. Fitzgerald, M. D	City physician.
Herrin	Harry Herrin	President, board of health.
Jacksonville	*Thomas A. Mann, M. D	Director of health.
Joliet	*Ed. J. Higgins, M. D	Commissioner of health.
Kankakee	Wm. Yates, M. D	City health officer.
Kewanee	H. N. Heflin, M. D	Commissioner of health.
La Salle	*E. W. Weis, M. D	Health commissioner.
Lincoln	L. R. Branom, M. D	Health officer.
Marion	David H. Harris, M. D	President, board of health.
Mattoon	R. J. Coultas, M. D	City health officer.
Maywood	R. L. Reynolds, M. D	Health officer.
Moline	E. A. Edlen, M. D	City physician.
Mount Vernon	C. O. Hamilton, M. D	Do.
Murphysboro	Boyd Thorp	Commissioner of health and safety.
Oak Park	Frank S. Needham, M. D	Commissioner of health.
Ottawa	Enos E. Palmer, M. D	Health officer.
Pekin	L. R. Clary, M. D	City health officer.
Peoria	Sandor Horwitz, M. D	Health commissioner.
Quincy	*John W. H. Pollard, M. D	Health officer.
Rock Island	Harry Frey, M. D	Health commissioner.
Rockford	*N. O. Gunderson, M. D	Commissioner of health.
Springfield	*Raymond V. Brokaw, M. D	Superintendent of health.
Streator		
Urbana	Geo. F. Way, M. D	Health officer.
Waukegan	H. C. Hoag, M. D	City physician.
West Frankfort	H. L. Davis, M. D	Do.
Indiana:		
Anderson	E. M. Conrad, M. D	Secretary, board of health.
Bloomington	C. E. Harris, M. D	City health officer.
Clinton	I. D. White, M. D	Secretary, board of health.
Connersville	B. R. Smith, M. D	Do.
Crawfordsville	Aubrey L. Loop, M. D	City health officer.
East Chicago	Milton A. Given, M. D	Secretary, department of health.
Elkhart		
Elwood	Harry W. Fitzpatrick, M. D	Do.
Evansville	W. C. Dyer, M. D	Secretary, board of health.
Fort Wayne	John H. Gilpin, M. D	Health officer.
Frankfort	H. N. Oliphant, M. D	Secretary, board of health.
Gary	Wm. J. White, M. D	Do.
Hammond	William A. Buchanan, M. D	Do.
Huntington	R. F. Frost, M. D	Do.
Indianapolis	*Herman G. Morgan, M. D	City sanitarian.
Jeffersonville	Davis L. Field, M. D	Secretary, board of health.
Kokomo	T. C. Cochran, M. D	Do.
La Fayette	A. J. Bauer, M. D	City health commissioner.
Laporte	*John Pracher, M. D	Do.
Logansport	*Fred G. Six	Health inspector.
Marion	V. V. Cameron, M. D	City health officer.
Michigan City	Nelle C. Reed, M. D	Health officer.
Mishawaka	Leo Paul Van Rie, M. D	Secretary, board of health.
Muncie	U. G. Poland, M. D	Do.
New Albany	Chester C. Funk, M. D	Do.
Newcastle	William C. Heilman, M. D	Do.
Peru	D. C. Ridenour, M. D	Do.
Richmond	Charles E. Duffin, M. D	City health officer.
South Bend	Charles S. Bozenbury, M. D	Secretary, board of health.
Terre Haute	Geo. T. Johnson, M. D	Do.
Vincennes	Clarke E. Steward, M. D	Do.
Wabash	L. O. Sholty, M. D	Health officer.
Whiting	E. L. Dewey, M. D	Secretary, board of health.
Iowa:		
Boone	Wm. Woodburn, M. D	Health officer.
Burlington	George H. Steinle, M. D	Do.
Cedar Rapids	W. E. Brown, M. D	City physician.
Clinton	H. R. Sugg, M. D	Health officer.
Council Bluffs	A. A. Robertson, M. D	Do.
Davenport	*Theodore J. Myers	Do.
Des Moines	*H. L. Sayler, M. D	Health commissioner.
Dubuque	*D. C. Steelsmith, M. D., C. P. H	Health officer.
Fort Dodge		
Fort Madison	J. M. Casey, M. D	Physician to board of health.
Iowa City	T. L. Hazard, M. D	Health officer.
Keokuk	Bruce L. Gilfillan, M. D	Physician to board of health.

City.	Name of health officer.	Official title.
Iowa—Continued.		
Marshalltown	Robert Crichton Molison, M. D	City health officer.
Mason City	C. W. Hubbard, M. D	Superintendent of health.
Muscatine	Edmond B. Fulliam, jr., M. D	City health officer.
Ottumwa	*M. Mills, M. D	City physician.
Sioux City		
Waterloo	H. W. Sigworth, M. D	Health officer.
Kansas:		
Arkansas City	Ernest F. Day, M. D	Chairman, board of health.
Atchison	Charles W. Robinson, M. D	Health officer.
Chanute	M. A. Duncan, M. D	City physician.
Coffeyville	W. H. Wells, M. D	Do.
El Dorado	*J. W. Buckley	City health officer.
Emporia	*J. S. Fulton, M. D	County health officer.
Fort Scott	C. L. Mosley, M. D	Assistant collaborating epidemiologist, U. S. P. H. S.
Hutchinson		
Independence		
Kansas City	*L. B. Gloyne, M. D	Commissioner of health.
Lawrence	*Arthur W. Clark, M. D	Superintendent of public health.
Leavenworth	C. D. Lloyd, M. D	City health officer.
Newton	H. M. Glover, M. D	County health officer.
Parsons	L. B. Kackley, M. D	Health officer.
Pittsburg	Ralph E. Jenkins, M. D	Do.
Salina	J. E. Miller, M. D., D. D. S	County health officer.
Topeka	*Earle G. Brown, M. D	City health officer.
Wichita	*D. H. Cooper, M. D	Director, public welfare.
Kentucky:		
Ashland		
Covington	J. P. Riffe, M. D	City health officer.
Henderson	Wm. V. Neel, M. D	Do.
Lexington	*Charles H. Voorhies, M. D	Do.
Louisville	*Ellis Owen, M. D	Do.
Newport	John Todd, M. D	Do.
Owensboro	*George W. Duvall, M. D	Director, department of health.
Paducah	J. E. Fox, M. D	City health officer.
Louisiana:		
Alexandria	J. A. Packer, M. D	Chairman, board of health.
Baton Rouge	T. Jeff McHugh, M. D	President, board of health.
Lake Charles	John G. Martin, M. D	City health officer.
Monroe	D. I. Hirsh, M. D	President, board of health.
New Orleans	Edmund L. Leckert, M. D	Superintendent, public health.
Shreveport	Arthur G. Heath, M. D	President, board of health.
Maine:		
Auburn	*L. F. Hall, M. D	Health officer.
Augusta	George A. Coombs, M. D	Do.
Bangor	*Harry D. McNeil, M. D	Do.
Bath	*Chester S. Kingsley	City sanitarian.
Biddeford	*John W. Mahoney	Health officer.
Lewiston	*L. J. Dumont, M. D	Do.
Portland	*Thomas Tetreau, M. D	Do.
Sanford	*C. W. Blagden, M. D	Do.
Waterville	*William J. Young, M. D	Do.
Maryland:		
Annapolis		
Baltimore	*Charles Hampson Jones, M. D	Commissioner of health and registrar of vital statistics.
Cumberland	*Harvey H. Weiss	Health officer and registrar of vital statistics.
Frederick	Ira J. McCurdy, M. D	City health officer.
Hagerstown	S. M. Wagaman, M. D	County health officer.
Massachusetts:		
Adams		
Amesbury	Otis P. Mudge, M. D	Secretary, board of health.
Arlington	*William H. Bradley	Agent, board of health.
Athol		
Attleboro	William O. Hewitt, M. D	Health officer.
Belmont	*Henry Berger, jr., C. P. H	Agent, board of health.
Beverly	*Alonzo O. Woodbury	Do.
Boston	*Francis X. Mahoney, M. D	Health commissioner.
Braintree	*Edward O. Pierson	Secretary, board of health.
Brockton	David B. Tuholski, M. D	Health officer.
Brookline	Francis P. Denny, M. D	Do.
Cambridge	Simon B. Kelleher, M. D	Medical inspector.
Chelsea	*John F. Welsh	Health officer.
Chicopee	*Gertrude M. DeWitt	Agent and secretary.
Clinton	*Frederick E. Murphy	Agent, board of health.
Danvers	*Hugo Nappe	Health officer.
Dedham		
Easthampton	Clemence C. Buckner	Agent, board of health.
Everett	*William Gess	Do.
Fall River	*Samuel B. Morriss	Do.
Fitchburg	*Fred R. Brigham	Do.
Framingham	*Fred S. Dodson	Health officer.
Gardner	*William P. O'Donnell	Agent, board of health.

City.	Name of health officer.	Official title.
Massachusetts—Contd.		
Gloucester	*Patrick E. Curley	Sanitary inspector.
Greenfield	*Geo. P. Moore	Health agent.
Haverhill	*George T. Lennon	Agent and clerk.
Holyoke	*J. Sidney Wright	Agent and health officer.
Lawrence	Elias J. Hayes	Chairman, board of health.
Leominster	*Hugh E. Crain	Agent, board of health.
Lowell	*Francis J. O'Hare	Do.
Lynn	Michael R. Donovan, M. D	Commissioner, public health.
Malden	*Frederick Walmsley	Health inspector.
Marlboro	*John J. Cassidy	Agent, board of health.
Medford	William N. Lanigan, M. D	Medical inspector.
Melrose	Clarence P. Holden, M. D	Chairman, board of health.
Methuen	*John M. Laing	Clerk, board of health.
Milford	James J. Birmingham	Inspector.
Natick	Thomas F. Morris	Health officer.
New Bedford	*Wm. G. Kirschbaum	Agent and executive officer.
Newburyport	*William Thurston	Agent and clerk.
Newton	*Francis Geo. Curtis, M. D	Chairman, board of health.
North Adams	*D. W. Hyde	Agent, board of health.
Northampton	*George R. Turner	Do.
Northbridge	Daniel C. Duggan	Do.
Norwood	*James J. Mulvehill, M. D	Health officer.
Palmer	J. P. Schneider, M. D	Do.
Peabody	*James J. Ray	Agent, board of health.
Pittsfield	*Willys M. Monroe, M. D	City health officer.
Plymouth	Walter D. Shurtleff, M. D	Chairman, board of health.
Quincy	M. T. Sweeney, M. D	Health commissioner.
Revere		
Salem	*John J. McGrath	Agent, board of health.
Saugus	Chas. E. Light	Chairman, board of health.
Somerville	Frank L. Morse, M. D	Medical inspector and bacteriologist.
Southbridge	*Albert R. Brown	Agent.
Springfield	*William L. Young	Agent, board of health.
Taunton	T. F. Cusick, M. D	Chairman, board of health.
Wakefield		
Waltham	C. B. Fuller, M. D	Director public welfare.
Watertown	*John W. Tapper	Health officer.
Webster	Fred W. Taft	Agent, board of health.
West Springfield	J. J. Lysaght	Do.
Westfield	R. M. Marr, M. D	Chairman, board of health.
Weymouth	F. L. Doucett, M. D	Health officer.
Winchester	*Maurice Dinneen	Do.
Winthrop	*H. Clay Daniels	Do.
Woburn	*Edward T. Gorman	Agent and secretary.
Worcester		
Michigan:		
Adrain		
Alpena	D. A. Cameron, M. D	City physician.
Ann Arbor	John A. Wessinger, M. D	Health officer.
Battle Creek	*A. A. Hoyt, M. D	Do.
Bay City	John A. Keno, M. D	Do.
Benton Harbor	Carl A. Mitchell, M. D	Director public health.
Cadillac	D. Ralston, M. D	Health officer.
Detroit	*Henry F. Vaughn, D. P. H	Commissioner of health.
Escanaba	*Harry J. Defnet, M. D	Do.
Flint	*Robert A. Stephenson, M. D	Health officer.
Grand Rapids	*C. C. Slemons, M. D	Do.
Hamtrack	T. T. Dysarz, M. D	Health commissioner.
Highland Park	William N. Braley, M. D	Health officer.
Holland	Byron B. GodfreyM. D	Do.
Ironwood	*Louis Dorpat, M. D	Do.
Ishpeming	*Geo. G. Barnett, M. D	City health officer.
Jackson	*F. R. Town, M. D	Health officer.
Kalamazoo	*Aloin H. Rockwell, M. D	Do.
Lansing	*S. Rowland Hill, M. D	Health director.
Marquette	*Lowell L. Youngquist, M. D	Health officer.
Monroe	Chas. T. Southworth, M. D	City physician.
Mount Clemens	Edward G. Folsom, M. D	Health officer.
Muskegon	R. J. Harrington, M. D	Do.
Muskegon Heights	Carl Pangerl, M. D	City health officer.
Owosso	B. C. Mahaney, M. D	Health officer.
Pontiac	*C. A. Neafie, M. D	Director of public health.
Port Huron	*Gertrude O'Sullivan, M. D	Health officer.
River Rouge	Claude A. Smith, M. D	Do.
Saginaw	*William De Kleine, M. D	Do.
Sault Ste. Marie	*John J. Griffin, M. D	City health officer.
Traverse City	George A. Holliday, M. D	Health officer.
Wyandotte		
Minnesota:		
Austin	Clifford C. Lock, M. D	Do.
Duluth	L. A. Sukeforth, M. D	Director of health.
Faribault	Frederick U. Davis, M. D	Health commissioner.
Hibbing	Hugh W. Reynolds, M. D	Chairman, board of health.
Mankato	A. F. Kemp, M. D	Health commissioner.

City.	Name of health officer.	Official title.
Minnesota—Continued.		
Minneapolis	*F. E. Harrington, M. D	Commissioner of health.
Rochester	C. H. Mayo, M. D.[1]	Health officer.
St. Cloud	P. E. Stangl, M. D	City physician.
St. Paul	*Benjamin F. Simon, M. D	Chief health officer.
Virginia		
Winona	William Vardaman Lindsay, M. D	Health officer.
Mississippi:		
Biloxi	Geo. F. Carroll, M. D	City health officer.
Columbus	Thomas Toxey Box, M. D	Do.
Greenville	*A. J. Ware, M. D	City and county health officer.
Hattiesburg	J. D. Donald, M. D	Do.
Jackson	T. P. Sparks, Jr., M. D	City health officer.
Laurel	P. C. Risher, M. D	Do.
Meridian	T. J. Houston, M. D	Do.
Natchez	W. H. Aikman, M. D	County and city health officer.
Vicksburg	Sylvan Myers, M. D	County health officer.
Missouri:		
Cape Girardeau	*Robert Wilson	Health officer.
Carthage	Lloyd B. Clinton, M. D	Deputy State health commissioner
Columbia	W. A. Norris, M. D	Do.
Hannibal	*E. E. Waldo, M. D	City physician.
Independence	Calvin Atkins, M. D	City health officer.
Jefferson City	Hugh Granville Dallas, M. D	City physician.
Joplin	*M. B. Harutun, M. D	Commissioner of health.
Kansas City	*Eugune H. Bullock, M. D	Health commissioner.
Moberly	C. H Dixon, M. D	Do.
St. Joseph	Leroi Beck, M. D	City health officer.
St. Louis	*Mac C. Starkloff, M. D	Health commissioner.
Sedalia	*C. T. Robinson	Sanitary officer.
Springfield	*Lon Sharp	Commissioner of health.
Webster Grove	Arthur W. Westrup, M. D	Health commissioner.
Montana:		
Anaconda		
Billings	James I. Wernham, M. D	Health officer.
Butte	J. B. Freund, M. D	Do.
Great Falls	*William H. Pickett, M. D	City-county health officer.
Helena	*Arthur Jordan, M. D	Field agent, U. S. P. H. S.
Missoula	*F. D. Pease, M. D	Health officer.
Nebraska:		
Grand Island	Frank D. Ryder, M. D	City physician.
Hastings	James V. Beghtol, M. D	Do.
Lincoln	*Chauncey F. Chapman, M. D	Superintendent of health.
North Platte		
Omaha	A. S. Pinto, M. D	Health commissioner.
Nevada:		
Reno	Albert F Adams, M. D	Secretary board of health.
New Hampshire:		
Berlin		
Claremont	William P. Prescott	Health officer.
Concord	*Charles E. Palmer	Sanitary officer.
Dover	*Wm. E. Whitney	Executive officer.
Keene	*Fred C. Nims	Health officer.
Laconia		
Manchester	*Howard A. Streeter, M. D	Do.
Nashua	P. J. McLaughlin, M. D	Do.
Portsmouth	L. R. Hazzard, M. D	Sanitary inspector.
New Jersey:		
Asbury Park	*B. H. Obert	Health officer and registrar of vital statistics.
Atlantic City	Samuel L. Salasin, M. D	Health officer.
Bayonne	William W. Brooke, M. D	Do.
Belleville	W. Brand Smith	Do.
Bloomfield	*Joseph C. Saile	Do.
Bridgeton	*Charles E. Bellows, Ph. G	Sanitary inspector.
Camden	*A. L. Stone, M. D	Director of public health.
Carteret		
Clifton	J. P. Quinlan	Health officer.
Collingswood		
Dover	*John G. Taylor	Do.
East Orange		
Elizabeth	*Louis J. Richards	Do.
Engelwood	*John A. Manson	Sanitary inspector.
Garfield	Chas. B. Bleasby, M. D	Health officer.
Gloucester	J. Alonzo Beck, M. D	Do.
Hackensack	*L. Van D. Chandler	Do.
Harrison	*John T. McClure	Do.
Hoboken	J. F. X. Stack, M. D	Health commissioner.
Irvington	*Paul C. Schotte	Health officer.
Jersey City	*James J. Hagan	Do.
Kearny	*Henry V. Amerman	Do.
Long Branch	*R. Clifford Errickson	Do.

[1] A full-time deputy health officer employed.

City.	Name of health officer.	Official title.
New Jersey—Continued.		
Millville	Frank Bullock	Health inspector.
Montclair	*Carl T. Pomeroy, C. P. H	Health officer.
Morristown	*John F. Kilkenny	Sanitary inspector.
New Brunswick	E. I. Cronk, M. D	Health officer.
Newark	*Charles V. Craster, M. D., D. P. H	Do.
Nutley	*Eugene H. Sullivan	Do.
Orange	*Lenore Young, R. N	Health officer and registrar of vital statistics.
Passaic	John N. Ryan, M. D	Health officer.
Paterson	*Frederick P. Lee, M. D	Do.
Perth Amboy	*Chas. S. Thompson, D. V. S	Do.
Phillipsburg	*Alma L. Williston, M. D	Do.
Plainfield	*N. J. Randolph Chandler	Do.
Rahway	Frederick William Sell, M. D., D.P.H.	Do.
Ridgefield Park	William F. Reynolds, D. V. M	Sanitary inspector.
Rutherford	Clarence W. Byers, M. D	Medical director.
Summit	Henry P. Dengler, M. D	Executive officer.
Trenton	Alton S. Fell, M. D	Health officer.
Union	Charles Hopkins	Chief of police and health officer.
West Hoboken	*Frank A. Frederick	Health officer.
West New York	*Rudolph Kunze	Chief health inspector.
West Orange	*David E. Buckley	Health officer.
Westfield	*Andrew Carney	Executive officer.
New Mexico:		
Albuquerque	*James R. Scott, M. D	County health officer.
New York:		
Albany	James W. Wiltse, M. D	Health officer.
Amsterdam	Julius Schiller, M. D	Commissioner of health.
Auburn	Thomas Conant Sawyer, M. D	Health officer.
Batavia	John W. Baker, M. D	City health officer.
Beacon		
Binghamton	C. J. Longstreet, M. D	Health officer.
Buffalo	*Francis E. Fronczak, M. D	Health commissioner.
Cohoes	E. M. Bell, M. D	Health officer.
Corning	Frank S. Swain, M. D	Do.
Cortland	A. C. Knapp, M. D	Do.
Dunkirk	G. E. Ellis, M. D	Do.
Elmira	Reeve B. Howland, M. D	Do.
Endicott	*Dorr W. Hardy, M. D	Do.
Fulton	C. L. Fessenden, M. D	Do.
Geneva	C. W. Grove, M. D	Do.
Glens Falls	*Virgil D. Selleck, M. D., C. P. H	Do.
Gloversville	Alexander L. Johnson, M. D	City health officer.
Herkimer	Albert L. Fagan, M. D	Health officer.
Hornell	Bertis R. Wakeman, M. D	Do.
Hudson	Chalres R. Skinner, M. D	Do.
Ilion	Frank B. Conterman, M. D	Do.
Ithaca	*Lewell T. Genung, M. D	Do.
Jamestown	*John J. Mahoney, M. D	Superintendent of public health.
Johnson City	Rollin O. Crosier, M. D	Health officer.
Johnstown	F. M. Neuendorf, M. D	City phycician.
Kingston	Daniel Connelly, M. D	Health officer.
Lackawanna	A. S. Culkowski, M. D	Do.
Little Falls	A. B. Sautry, M. D	Health officer.
Lockport	Thomas E. Spalding, M. D	City physician.
Middletown	H. J. Shelley, M. D	Health officer.
Mount Vernon	Wm. H. Purdy, M. D	Commissioner of health.
New Rochelle	*Edwin H. Codding, M. D	Health officer.
New York	*Frank J. Monaghan, M. D	Commissioner of health.
Newburgh	Thomas J. Burke, M. D	Health officer.
Niagara Falls	Edward E. Gillick, M. D	Do.
North Tonawanda	Henry C. Lapp, M. D	Do.
Ogdensburg		
Olean		
Oneida	Nelson O. Brooks, M. D	Do.
Oneonta		
Ossining	Amos O. Squire, M. D	Do.
Oswego	Harvey S. Albertson, M. D	Do.
Peekskill	Fred A. Snowden, M. D	Do.
Plattsburg	Leo A. Schiff, M. D	Do.
Port Chester	W. J. Sheehan, M. D	Do.
Port Jervis	G. Otto Pobe, M. D	Do.
Poughkeepsie	*William H. Conger, M. D	Do.
Rensselaer		
Rochester	*George W. Goler, M. D	Do.
Rome	Roy J. Marshall, M. D	Do.
Salamanca	L. D. Gunn, M. D	Health commissioner.
Saratoga Springs	Charles B. Small, M. D	City health officer.
Schenectady	John H. Collins, M. D	Commissioner of health.
Syracuse	Thomas P. Farmer, M. D	Do.
Tonawanda		
Troy	W. N. Campaigne, M. D	Health officer.
Utica	Hugh H. Shaw, M. D	Do.
Watertown		

City.	Name of health officer.	Official title.
New York—Continued.		
Watervliet	Wm. B. D. Van Auken, M. D	Health commissioner.
White Plains	Edwin G. Ramsdell, M. D	Health officer.
Yonkers	Clarence W. Buckmaster, M.D., C.P.H.	Commissioner of health.
North Carolina:		
Asheville	*Daniel E. Sevier, M. D	Health officer.
Charlotte		
Concord	*S. E. Bucanan, M. D	Do.
Durham	*J. H. Epperson	Superintendent of health.
Gastonia	James A. Anderson, M. D	City physician.
Goldsboro		
Greensboro	*Oliver L. Sharp, M. D	Health officer.
High Point	*Claude Hussey	Do.
Kinston	*Robert S. McGeachy, M. D	Do.
New Bern	*D. E. Ford, M. D	County health officer.
Raleigh	*A. C. Bulla, M. D	Health officer.
Rocky Mount	*H. Lee Large, M. D	Superintendent, department of health.
Salisbury	*C. W. Armstrong, M. D	Health officer.
Wilmington	*John H. Hamilton, M. D	County health officer.
Wilson	*L. J. Smith, M. D	Health officer.
Winston-Salem	*R. L. Carlton, M. D	City health officer.
North Dakota:		
Fargo	*B. K. Kilbourne, M. D	Do.
Grand Forks		
Minot		
Ohio:		
Akron	*Donald D. Shira, M. D	Director of health.
Alliance	Floyd R. Stamp	Health commissioner.
Ashland	Paul R. Ensign, M. D	Director public welfare.
Ashtabula	A. J. Pardee, M. D	Health officer.
Barberton	W. A. Mansfield, M. D	Health commissioner.
Bellaire	Wm. J. Shepherd, M. D	Do.
Bucyrus	A. H. McCrory, M. D	Do.
Cambridge	C. L. Vorhies, M. D	Do.
Canton	F. M. Sayre, M. D	Do.
Chillicothe	*Gilbert E. Robbins, M. D	Do.
Cincinnati	*Wm. H. Peters, M. D	Do.
Cleveland	*H. L. Rockwood, M. D	Do.
Cleveland Heights	*Robert Lockhart, M. D	Director of health.
Columbus	*James Anderson Beer, M. D	Health commissioner.
Conneaut	Inez Hyatt, M. D	Do.
Coshocton		
Cuyahoga Falls	*R. H. Markwith, M. D.[1]	Do.
Dayton	*A. O. Peters, M. D	Do.
East Cleveland	George W. Stober, M. D	Director of health.
East Liverpool	*John A. Fraser, M. D	Health commissioner.
East Youngstown		
Elyria	G. E. French, M. D	Do.
Findlay	*Edw. W. Misamore, M. D	Do.
Fostoria	*W. N. Caldwell	Do.
Fremont		
Hamilton	M. F. Vereker, M. D	Do.
Ironton	O. U. O'Neill, M. D	Do.
Kenmore	*R. H. Markwith, M. D.[1]	Do.
Lakewood	Walter J. Benner, M. D	Do.
Lancaster		
Lima	J. B. Poling, M. D	Do.
Lorain	Valloyd Adair, M. D	Do.
Mansfield	John Maglott, M. D	Do.
Marietta	John W. Donaldson, M. D	Do.
Marion		
Martins Ferry	*Charles Keller	Do.
Massillon		
Middletown	G. D. Lummis, M. D	Do.
New Philadelphia	*Joseph Blickensderfer, M. D	Do.
Newark	William H. Knauss, M. D	Do.
Niles	W. A. Werner, M. D	Do.
Norwood	*Harry J. Wittenberg, M. D	Do.
Piqua	J. G. Freshour, M. D	Do.
Portsmouth	Oral D. Tatje, M. D	Do.
Salem	*Thomas Teasdale Church, M. D	Do.
Sandusky	*F. M. Houghtaling, M. D	Do.
Springfield	*Oscar M. Craven, M. D	Director of public health.
Steubenville	*Theodore W. Smith	Health commissioner.
Tiffin	J. A. Gosling, M. D	Do.
Toledo	Daniel W. Iford, M. D	Do.
Warren	Geo. N. Simpson, M. D	Do.
Youngstown	H. E. Welch, M. D	Commissioner of health and welfare.
Zanesville	Beatrice Todd Hagen, M. D	Superintendent of health.
Oklahoma:		
Ardmore	A. Y. Easterwood, M. D	City health officer.
Bartlesville	G. F. Woodring, M. D	City superintendent of health.
Chickasha	E. L. Dawson, M. D	Do.

[1] Commissioner of health for Cuyahoga Falls, Kenmore and Summit County.

City.	Name of health officer.	Official title.
Oklahoma—Continued.		
Enid	R. C. Baker, M. D	City superintendent of health
Guthrie	Wm. C. Miller, M. D	Do.
McAlester	W. C. Graves, M. D	City health officer.
Muskogee	F. W. Ewing, M. D	Do.
Oklahoma	Cary W. Townsend, M. D	Health commissioner.
Okmulgee		
Sapulpa	Geo. H. Wetzel, M. D	City health officer.
Shawnee	Thos. C. Sanders, M. D	Superintendent of health.
Tulsa	D. A. Beard, M. D	Do.
Oregon:		
Astoria	Nellie S. Vernon, M. D	City and county health officer.
Eugene		
Portland	*George Parrish, M. D	City health officer.
Salem	Wm. B. Mott, M. D	Do.
Pennsylvania:		
Allentown	*J. Treichler Butz, M. D., D. D. S	Health officer.
Altoona	*T. G. Herbert	Chief bureau of health.
Ambridge	*Louis Hermann	Health officer.
Beaver Falls	*Nelson W. Osmond	Do.
Berwick	P. T. Groh	Do.
Bethlehem	H. A. Conahan, M. D	City physician.
Braddock	*Jas. E. Wills	Health officer.
Bradford	*Carl L. Peterson	Do.
Bristol	John M. Wright	Do.
Butler	*H. M. Stanley	Do.
Canonsburg	*Andrew H. Neebling	Do.
Carbondale	*W. J. Morgan	Sanitary officer.
Carlisle	*A. P. Liszman	Health officer.
Carnegie	Harvey Keisling	Do.
Carrick	Arthur W. Lowe	Do.
Chambersburg	Walter J. Fahnestock	Do.
Charleroi	*W. M. Darby	Health inspector.
Chester	*John W. Shaw	Health officer.
Clairton	*Wm. P. Davidson	Do.
Coatesville	Charles V. Peace, V. S	Do.
Columbia	G. M. Rodenhauser	Do.
Connellsville	*George Hetzel	Sanitary police.
Dickson City	*Frank J. Meehan	Health officer.
Donora	J. B. McCune	Do.
Dubois	Luther W. Quinn, M. D	Do.
Dunmore		
Duquesne		
Easton	J. James Condran, M. D	City health officer.
Ellwood City	*William T. Jones	Health officer.
Erie	J. W. Wright, M. D	Do.
Farrell	*Wm. C. Heinze	Do.
Franklin		
Greensburg		
Harrisburg	John M. J. Raunick, M. D	Health officer and director.
Hazleton	*P. J. Bonner	Health officer.
Homestead	*James L. King	Do.
Jeannette	*A. T. Coon	Do.
Johnstown		
Kingston	*J. F. Seward	Do.
Lancaster	*Benj. F. Charles	Do.
Lansford	Wm. J. Early	Do.
Lebanon	E. H. Gingrich, M. D	City health officer.
Lewistown	*H. E. Fetterolf	Do.
McKee's Rocks	*B. V. Anderson	Do.
McKeesport	*Daniel F. Marsh	Do.
Mahanoy City	*John Sullivan	Do.
Meadville		
Monessen	*Francis E. Gibson	Inspector public safety.
Mount Carmel	*F. Gross	Health officer.
Nanticoke	*Edward J. Humphreys	Do.
New Castle	William L. Steen, M. D	Do.
New Kensington	A. L. Davis	Do.
Norristown	*Chas. E. White	Do.
North Braddock	*Robert M. Sylves	Do.
Oil City	*Wm. J. Lewis	Do.
Old Forge		
Olyphant	*James F. O'Malley	Do.
Philadelphia	*Wilmer Krusen, M. D	Director, department of public health.
Phoenixville	Eugene Fogarty	Health officer.
Pittsburgh	*C. J. Vaux, M. D	Director, department of public health.
Pittston	*Matthew A. Hurst	Health officer.
Plymouth		
Pottstown	*A. John Andre	Do.
Pottsville	*O. L. Kleckner	Do.
Punxsutawney	J. Frank Boney	Do.
Reading	*Ira J. Hain, M. D	Do.
Scranton	F. R. Wheelock, M. D	Director.

City.	Name of health officer.	Official title
Pennsylvania—Contd.		
Shamokin		
Sharon	*L. C. Brainard	Sanitary officer.
Shenandoah	*Cyrus Geise	Health officer.
Steelton	*E. G. Butler	Do.
Sunbury	*Victor A. Koble	Do.
Swissvale	*L. F. Howard	Do.
Tamaqua	Lamont Perrine	Do.
Taylor	E. E. Edwards, M. D	Do.
Uniontown	*W. C. Hall	Do.
Vandergrift		
Warren	*Ralph N. Brown	Do.
Washington	*J. G. Dinsmore	Do.
Waynesboro	*Percy H. Snowberger	Do.
West Chester	Jos. Scuttlegood, M. D	Medical director.
Wilkes-Barre		
Wilkinsburg	*J. M. Snyder	Health officer.
Williamsport	Robert F. Trainer, M. D	City health officer.
Woodlawn	*James E. Tanner	Health officer.
York	J. Frank Small, M. D	Director of public health.
Rhode Island:		
Bristol	John Magee	Health officer.
Central Falls	Q. R. V. Fenwick, M. D	Superintendent of health.
Cranston	Daniel S. Latham, M. D	Do.
Cumberland	Stephen A. Kenney, M. D	Health officer.
East Providence	William H. T. Hamill, M. D	Do.
Newport	*J. W. Sampson	Executive officer.
Pawtucket	Florian A. Ruest, M. D	Superintendent of health.
Providence	*Charles V. Chapin, M. D	Do.
Warwick		
West Warwick	H. Barton Bryer, M. D	Health officer.
Westerly	Samuel C. Webster, M. D	Superintendent of health.
Woonsocket	C. B. Barry, M. D	Health officer.
South Carolina:		
Anderson	Lee M. Milford, M. D	Do.
Charleston	*J. Mercein Green, M. D	Do.
Columbia	*Jean B. LaBorde, M. D	City health officer.
Florence	*P. H. Brigham, M. D	Health commissioner.
Greenville	*Clarence E. Smith, D. V. M	Do.
Spartanburg		
Sumter	*D. O. Browning, D. V. M	Health officer.
South Dakota:		
Aberdeen	*Geo. M. Boteler, M. D	Do
Sioux Falls	*W. M. Barnes, M. D	Director of public health.
Watertown		
Tennessee:		
Chattanooga	E. B. Wise, M. D	Director of health.
Jackson		
Johnson City		
Knoxville	Marvin F. Haygood, M. D., C. P. H	Health officer.
Memphis	J. J. Durrett, M. D	Superintendent of health.
Nashville	*W. E. Hibbett, M. D	City health officer.
Texas:		
Abilene	W. Auda Vee Cash, M. D	County-city health officer.
Amarillo	A. H. Lindsay, M. D	City physician.
Austin	Zeno T. Martin, M. D	City health officer.
Beaumont	Dru McMicken, M. D	Do.
Brownsville	W. E. Spivey, M. D	Do.
Cleburne	Wm. E. Lucey, M. D	Do.
Corpus Christi	W. E. Wills, M. D	Do.
Corsicana		
Dallas	*Lane B. Cooke, M. D	Director of public health.
Del Rio	B. F. Orr, M. D	City health officer.
Denison	Alex W. Acheson, M. D	Health officer.
Eastland	L. C. Brown, M. D	County health officer
El Paso	*Jno. W. Brown, M. D	City health officer.
Fort Worth	A. W. Montague, jr., M. D	Do.
Galveston	H. O. Sappington, M. D	Do.
Greenville	W. M. Dickens, M. D	Health officer.
Houston	*Arthur H. Flickwir, M. D	Do.
Laredo		
Marshall	Galen Eads, M. D	City physician.
Orange	F. W. Lawson, M. D	City health officer.
Palestine	R. H. McLeod, M. D	Do.
Paris	Lewis Melvin Gooch, M. D	Do.
Port Arthur	J. P. Reed, M. D	City physician.
Ranger		
San Angelo	A. C. DeLong, M. D	City health officer.
San Antonio	W. A. King, M. D	Do.
Sherman		
Temple		
Texarkana	Wm. Hibbetts, M. D	Do.
Tyler	Albert Woldert, M. D	Do.
Waco	R. F. Minnock, M. D	Do.
Wichita Falls	*A. H. Douglas, D. V. M	Director, health department

City.	Name of health officer.	Official title.
Utah:		
Logan	P. W. Eliason, M. D	City physician.
Ogden	*Roy H. Wilson, M. D	Health commissioner.
Provo	Arnold E. Robinson, M. D	City physician.
Salt Lake City	W. Christopherson, M. D	Commissioner of health.
Vermont:		
Barre	Marshal D. Lamb, M. D	Health officer.
Bennington	*Joseph M. Ayers	Do.
Burlington	*J. W. Courtney, M. D	Do.
Rutland	Geo. Rustedt, M. D	Do.
Virginia:		
Alexandria	*Louis E. Foulks, M. D	Do.
Charlottesville	*Wm. S. Keister, M. D	Director, health department.
Danville	*R. W. Garrett, M. D	Health officer.
Lynchburg	*Mosby G. Perrow, M. D	Director, public welfare.
Newport News	*Coleman Bernard Ransone, M. D	Health officer.
Norfolk	*Powhatan S. Schenck, M. D	Health commissioner.
Petersburg	*Robert A. Martin, M. D	Chief executive of health center.
Portsmouth	*Lonsdale J. Roper, M. D	Director, public welfare.
Richmond	*C. C. Hudson, M. D	Health officer.
Roanoke	*W. Brownley Foster, M. D	Do.
Staunton	J. Fairfax Fulton, M. D	City health officer.
Washington:		
Aberdeen	J. B. Kinne, M. D	Health officer.
Bellingham	W. W. Ballantine, M. D	City health officer.
Bremerton	T. H. Holmes, M. D	Do.
Everett	J. Spencer Purdy, M. D	Do.
Hoquiam	H. C. Watkins, M. D	Do.
Seattle	*George N. McLoughlin, M. D	Commissioner of health.
Spokane	*Ralph Hendricks, M. D	Health officer.
Tacoma	C. F. Engels, M. D	Do.
Vancouver	R. D. Wiswall, M. D	City physician.
Walla Walla	*Joseph P. Kane, M. D	Health officer.
Yakima	*H. H. Smith, M. D	Do.
West Virginia:		
Bluefield	*David Littlejohn, M. D	Director health and welfare.
Charleston	J. B. Lohan, M. D	Health commissioner.
Clarksburg	*Robert Linn Osborn, M. D	City physician.
Fairmont	*J. A. Jamison, M. D	City health officer.
Huntington	Earl B. Gerlach, M. D	Do.
Martinsburg	J. F. Farr, M. D	Executive officer, board of health.
Morgantown	R. H. Edmondson, M. D	Health officer.
Moundsville	A. F. Compton, M. D	Do
Parkersburg	Horace D. Price, M. D	Do.
Wheeling	*William Hay McLain, M. D	Health commissioner.
Wisconsin:		
Appleton	Wm. C. Felton, M. D	City physician.
Ashland	C. O. Heitzman, M. D	Health commissioner.
Beloit	*L. M. Field, M. D	Health officer.
Eau Claire	J. F. Farr, M. D	Executive officer, board of health.
Fond du Lac	A. C. Dana, M. D	Health officer.
Green Bay	*Geo. F. Goggins, M. D	Commissioner of health.
Janesville	Fred B. Welch, M. D	Health officer.
Kenosha	*G. Windesheim, M. D	Director of health.
La Crosse	*Anthony M. Murphy	Health commissioner.
Madison	*E. V. Brumbaugh, M. D	Health officer.
Manitowoc	Max Staehle, M. D	Commissioner of health.
Marinette	S. Berglund, M. D	Health officer.
Milwaukee	*Geo. C. Ruhland, M. D	Commissioner of health.
Oshkosh	*Arthur Henri Broche, M. D	Health officer.
Racine	*William Waldo Bauer, M. D	Do.
Sheboygan	*Joseph C. Elfers, M. D	Commissioner of public health.
Stevens Point	F. H. Southwick, M. D	Health commissioner.
Superior	P. G. McGill, M. D	Do.
Waukesha	Geo. E. Peterson, M. D	Do.
Wausau	*Leigh F. Bugbee	Health officer.
West Allis	*Samuel C. McCorkle, M. D	Health commissioner.
Wyoming:		
Casper	*Ralph J. Malott, M. D	Director of health department.
Cheyenne	J. W. Conway, M. D	Health officer.

CURRENT COURT DECISIONS PERTAINING TO PUBLIC HEALTH.

Massachusetts filled milk act construed.—Chapter 170 of the 1923 acts of Massachusetts, the so-called "filled milk" act, which prohibits, for the purposes of sale or exchange, adding to or blending or compounding with milk or cream any fat or oil other than milk fat, has been held by the United States District Court for Massachusetts not to apply to "Carolene," a compound of skimmed milk and egg yolk subjected to partial evaporation and containing about one-tenth of 1 per cent of fat derived from the egg yolk. It was admitted that "Carolene" is a wholesome and desirable food product sold for use in coffee, baking, and other culinary purposes, and the court enjoined the enforcement of the act as against plaintiffs on the ground that, properly construed, it did not cover "Carolene," falling under the principle that "a thing may be within the letter of the statute and yet not within the statute, because not within its spirit nor within the intention of its makers." (Carolene Products Co. *v.* Mahoney et al., 294 Fed. 902.)

Milk ordinance held valid.—An ordinance of Tarboro, N. C., prohibiting the sale of milk or cream unless pasteurized in accordance with the standard set forth in the ordinance, and also prohibiting the sale of milk by unlicensed persons, has been held valid by the Supreme Court of North Carolina in a case where a judgment of conviction for violation of the ordinance was affirmed. (State *v.* Edwards, 121 S. E. 444.)

DEATHS DURING WEEK ENDED MAY 31, 1924.

Summary of information received by telegraph from industrial insurance companies for week ended May 31, 1924, and corresponding week of 1923. (From the Weekly Health Index, June 3, 1924, issued by the Bureau of the Census, Department of Commerce.)

	Week ended May 31, 1924.	Corresponding week, 1923.
Policies in force	56, 075, 942	52, 292, 756
Number of death claims	8, 266	8, 185
Death claims per 1,000 policies in force, annual rate	7. 7	8. 2

Deaths from all causes in certain large cities of the United States during the week ended May 31, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923. (From the Weekly Health Index, June 3, 1924, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended May 31, 1924.		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended May 31, 1924.[2]
	Total deaths.	Death rate.[1]		Week ended May 31, 1924.	Corresponding week, 1923.	
Total (65 cities)	6,355	12.2	[3] 12.3	786	[3] 764	
Akron	29			11	6	116
Albany [4]	36	15.8	10.2	3	2	66
Atlanta	78	17.9	18.0	8	15	
Baltimore [4]	197	13.1	14.2	20	26	58
Birmingham	60	15.6	14.4	11	10	
Boston	197	13.2	13.9	25	26	69
Bridgeport	23			4	4	63
Buffalo	119	11.4	15.3	18	18	76
Cambridge	25	11.6	13.1	4	2	69
Camden	37	15.3	9.7	3	2	47
Chicago [4]	627	11.1	11.1	92	90	85
Cincinnati	121	15.5	17.3	12	11	76
Cleveland	168	9.6	12.1	31	22	81
Columbus	70	13.7	13.4	7	5	67
Dallas	48	13.3	13.4	5	7	
Dayton	38	11.7	11.0	8	2	134
Denver	63			7	6	
Des Moines	33	11.9	12.6	1	6	
Detroit	259			54	50	101
Duluth	16	7.7	15.7	2	6	43
Erie	23			2	2	41
Fall River [4]	36	15.5	16.0	7	3	99
Flint	21			3	1	52
Fort Worth	24	8.4	7.6	5	3	
Grand Rapids	26	9.1	15.0	3	4	47
Houston	40			4	8	
Indianapolis	101	15.0	16.0	8	8	60
Jacksonville, Fla	38	19.3	9.4	7	2	
Jersey City	83	13.9	11.3	9	8	65
Kansas City, Kans	25	11.1	11.7	2	3	40
Kansas City, Mo	69	10.0	15.0	6	16	
Los Angeles	230			31	22	97
Louisville	76	15.3	16.2	4	12	38
Lowell	29	13.1	10.0	4	4	71
Lynn	18	9.1	9.6	1	2	25
Memphis	62	18.8	22.4	6	8	
Milwaukee	92	9.7	10.0	12	19	55
Minneapolis	82	10.2	11.3	13	12	70
Nashville [4]	50	21.1	12.8	5	8	
New Bedford	25	9.8	8.4	5	1	78
New Haven	39	11.6	8.7	2	2	26
New Orleans	149	19.0	18.0	17	23	
New York	1,368	11.9	10.6	160	132	65
Bronx Borough	165	9.9	7.4	18	11	63
Brooklyn Borough	440	10.4	9.9	53	43	57
Manhattan Borough	645	14.9	12.7	79	66	77
Queens Borough	91	8.6	8.1	9	9	49
Richmond Borough	27	10.8	16.8	1	3	18
Newark, N. J	82	9.6	9.2	9	5	42
Norfolk	24	7.6	11.1	3	8	55
Oakland	54	11.4	9.8	8	6	100
Oklahoma City	19	9.5		0		
Omaha	41	10.3	13.3	3	8	32
Paterson	31	11.5	13.1	2	4	33
Philadelphia	469	12.5	12.6	60	56	76
Pittsburgh	166	13.8	14.9	22	28	75
Portland, Oreg	62	11.6	10.5	3	5	31
Providence	70	15.0	16.3	14	8	114
Richmond	44	12.5	9.5	6	7	71
Rochester	80	12.8		11		86
St. Louis	182	11.7	13.8	17	22	
St. Paul	55	11.8	13.4	8	6	69
Salt Lake City [4]	29	11.8	12.4	5	9	83

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1923. Cities left blank are not in the registration area for births.
[3] Data for 63 cities.
[4] Deaths for week ended Friday, May 30, 1924.

Deaths from all causes in certain large cities of the United States during the week ended May 31, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923—Continued.

City.	Week ended May 31, 1924.		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended May 31, 1924.
	Total deaths.	Death rate.		Week ended May 31, 1924.	Corresponding week, 1923.	
San Antonio	54	14.7	15.2	16	13	----------
San Francisco	141	13.4	11.7	11	5	66
Schenectady	13	6.7	13.2	1	1	28
Seattle	56	----------	----------	4	7	39
Somerville	15	7.8	10.6	1	5	27
Spokane	25	----------	----------	1	5	21
Springfield, Mass	30	10.5	13.0	4	3	68
Syracuse	50	13.9	10.5	10	4	124
Tacoma	18	9.1	8.7	2	0	46
Toledo	63	11.9	10.3	10	6	95
Trenton	34	13.7	15.1	4	4	66
Utica	29	14.4	13.1	2	3	43
Washington, D. C	117	12.5	12.7	10	16	58
Waterbury	12	----------	----------	3	4	67
Wilmington, Del	27	11.7	12.4	3	3	65
Worcester	31	8.3	11.4	4	2	48
Yonkers	28	13.3	7.3	5	3	109
Youngstown	35	11.8	11.8	6	4	87

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CURRENT WEEKLY STATE REPORTS.

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

Reports for Week Ended June 7, 1924.

ALABAMA.

	Cases.
Chicken pox	40
Diphtheria	9
Influenza	7
Malaria	89
Measles	241
Mumps	69
Pellagra	19
Pneumonia	55
Poliomyelitis	2
Scarlet fever	3
Smallpox	117
Tuberculosis	44
Typhoid fever	17
Whooping cough	54

ARIZONA.

Chicken pox	1
Measles	20
Mumps	3
Scarlet fever	5
Smallpox	48
Trachoma	273
Tuberculosis	14
Typhoid fever	3

ARKANSAS.

Chicken pox	10
Diphtheria	1
Hookworm disease	7
Influenza	18
Malaria	69
Measles	42
Mumps	23
Pellagra	14
Scarlet fever	2
Smallpox	15

ARKANSAS—continued.

	Cases.
Tuberculosis	9
Typhoid fever	6
Whooping cough	27

CALIFORNIA.

Cerebrospinal meningitis:	
Kern County	1
Los Angeles	1
San Francisco	2
Santa Clara County	1
Diphtheria	208
Influenza	16
Leprosy—Los Angeles	1
Lethargic encephalitis:	
Los Angeles	3
Sacramento	1
Measles	532
Poliomyelitis—San Leandro	1
Scarlet fever	143
Smallpox:	
Long Beach	8
Los Angeles	78
Los Angeles County	32
Scattering	55
Typhoid fever	20
Typhus fever—Los Angeles	1

COLORADO.

(Exclusive of Denver.)

Chicken pox	23
Diphtheria	19
Influenza	2
Measles	95
Mumps	13
Pneumonia	5

COLORADO—continued.

	Cases.
Scarlet fever	6
Smallpox	11
Tuberculosis	44
Whooping cough	37

CONNECTICUT.

Chicken pox	39
Diphtheria	31
German measles	15
Influenza	1
Measles	110
Mumps	103
Pneumonia (lobar)	25
Scarlet fever	99
Tetanus	1
Tuberculosis (all forms)	34
Whooping cough	19

DELAWARE.

Chicken pox	1
Diphtheria	1
Malaria	1
Measles	14
Mumps	3
Scarlet fever	3
Typhoid fever	2
Whooping cough	1

DISTRICT OF COLUMBIA.

Chicken pox	41
Diphtheria	7
Influenza	2
Measles	22
Scarlet fever	23
Smallpox	3
Tuberculosis	21
Whooping cough	3

FLORIDA.

Cerebrospinal meningitis	1
Diphtheria	9
Malaria	15
Smallpox	1
Typhoid fever	14

GEORGIA.

Chicken pox	11
Diphtheria	12
Dysentery (bacillary)	7
Hookworm disease	11
Influenza	1
Malaria	13
Measles	10
Mumps	21
Paratyphoid fever	1
Pneumonia	11
Poliomyelitis	2
Scarlet fever	13
Smallpox	44
Tuberculosis (pulmonary)	8
Typhoid fever	5
Whooping cough	21

ILLINOIS.

Diphtheria:	
Cook County	61
Scattering	32

ILLINOIS—continued.

	Cases.
Influenza	6
Lethargic encephalitis:	
Chicago	2
Jo Daviess County	1
Measles	833
Pneumonia	227
Scarlet fever:	
Cook County	139
Kane County	8
La Salle County	9
Scattering	87
Smallpox:	
Douglas County	11
Lake County	13
Madison County	15
Scattering	21
Tuberculosis	298
Typhoid fever	14
Whooping cough	133

INDIANA.

Chicken pox	63
Diphtheria	36
Influenza	13
Measles	196
Pneumonia	4
Scarlet fever:	
Kosciusko County	10
Scattering	55
Smallpox:	
Clinton County	26
Marion County	36
Wabash County	11
Scattering	85
Tuberculosis:	
Marion County	18
Scattering	11
Typhoid fever:	
Lake County	9
Scattering	8
Whooping cough	47

IOWA.

Diphtheria	13
Scarlet fever	31
Smallpox	14

KANSAS.

Cerebrospinal meningitis	4
Chicken pox	62
Diphtheria	18
German measles	2
Influenza	3
Measles	594
Mumps	150
Pneumonia	26
Poliomyelitis	1
Scarlet fever	43
Smallpox	25
Tuberculosis	23
Typhoid fever	9
Whooping cough	109

LOUISIANA.[1]

Diphtheria	25
Dysentery	2

[1] Including New Orleans for the two weeks ended June 7, 1924.

LOUISIANA—continued.

	Cases.
Hookworm disease	45
Influenza	7
Malaria	58
Measles	135
Pneumonia	38
Scarlet fever	7
Smallpox	3
Tuberculosis	78
Typhoid fever	25
Whooping cough	6

MAINE.

Chicken pox	17
Diphtheria	21
German measles	78
Measles	86
Mumps	89
Pneumonia	9
Scarlet fever	21
Smallpox	2
Tuberculosis	24
Typhoid fever	3
Whooping cough	20

MARYLAND.[1]

Cerebrospinal meningitis	1
Chicken pox	70
Diphtheria	29
Dysentery	2
German measles	15
Influenza	8
Malaria	1
Measles	185
Mumps	28
Pneumonia (all forms)	37
Poliomyelitis	1
Scarlet fever	71
Smallpox	2
Trachoma	1
Tuberculosis	49
Typhoid fever	17
Whooping cough	20

MASSACHUSETTS.

Cerebrospinal meningitis	3
Chicken pox	110
Conjunctivitis (suppurative)	16
Diphtheria	122
German measles	66
Influenza	6
Lethargic encephalitis	3
Malaria	1
Measles	835
Mumps	237
Ophthalmia neonatorum	30
Pneumonia (lobar)	77
Poliomyelitis	1
Scarlet fever	272
Tetanus	2
Trachoma	1
Tuberculosis (all forms)	155
Typhoid fever	4
Whooping cough	69

[1] Week ended Friday.

MICHIGAN.

	Cases.
Diphtheria	135
Measles	713
Pneumonia	130
Scarlet fever	357
Smallpox	252
Tuberculosis	79
Typhoid fever	14
Whooping cough	113

MINNESOTA.

Cerebrospinal meningitis	1
Chicken pox	29
Diphtheria	46
Influenza	3
Measles	125
Pneumonia	3
Poliomyelitis	1
Scarlet fever	163
Smallpox	39
Tuberculosis	76
Typhoid fever	3
Whooping cough	10

MISSISSIPPI.

Diphtheria	7
Scarlet fever	2
Smallpox	15
Typhoid fever	9

MISSOURI.

Cerebrospinal meningitis	2
Chicken pox	68
Diphtheria	43
Influenza	24
Measles	156
Mumps	69
Ophthalmia neonatorum	1
Pneumonia	6
Scarlet fever	103
Smallpox	12
Trachoma	57
Tuberculosis	44
Typhoid fever	6
Whooping cough	61

MONTANA.

Diphtheria	15
Rocky Mountain spotted fever—Townsend	1
Scarlet fever	14
Smallpox	21
Tularæmia—Whitefish	1
Typhoid fever	1

NEBRASKA.

Chicken pox	17
Diphtheria	4
Measles	110
Pneumonia	1
Scarlet fever	11
Smallpox	3

NEW JERSEY.

Cerebrospinal meningitis	2
Chicken pox	173

NEW JERSEY—continued.

	Cases.
Diphtheria	86
Influenza	9
Malaria	4
Measles	627
Pneumonia	89
Scarlet fever	182
Smallpox	19
Typhoid fever	10
Whooping cough	150

NEW MEXICO.

Chicken pox	7
Diphtheria	21
Measles	74
Mumps	7
Pneumonia	4
Scarlet fever	4
Trachoma	1
Tuberculosis	4
Typhoid fever	1
Whooping cough	3

NEW YORK.

(Exclusive of New York City.)

Cerebrospinal meningitis	2
Diphtheria	109
Influenza	11
Lethargic encephalitis	7
Measles	1,394
Pneumonia	220
Poliomyelitis	3
Scarlet fever	259
Smallpox	8
Typhoid fever	35
Whooping cough	334

NORTH CAROLINA.

Cerebrospinal meningitis	1
Chicken pox	94
Diphtheria	19
German measles	4
Measles	391
Ophthalmia neonatorum	1
Scarlet fever	49
Septic sore throat	6
Smallpox	82
Typhoid fever	26
Whooping cough	196

OREGON.

Chicken pox	12
Diphtheria	17
Influenza	1
Lethargic encephalitis	[1] 1
Measles	25
Mumps	3
Pneumonia	[1] 4
Scarlet fever	16
Smallpox:	
Portland	8
Scattering	2
Tuberculosis	9
Typhoid fever	2
Whooping cough	2

[1] Deaths.

SOUTH DAKOTA.

	Cases.
Chicken pox	1
Diphtheria	6
Measles	52
Pneumonia	2
Rocky Mountain spotted fever	1
Scarlet fever	60
Smallpox	3
Tuberculosis	3
Whooping cough	1

TEXAS.

Anthrax	2
Chicken pox	71
Dengue	7
Diphtheria	17
Dysentery (epidemic)	2
Influenza	20
Measles	159
Mumps	121
Paratyphoid fever	5
Pneumonia	7
Scarlet fever	23
Smallpox	50
Trachoma	3
Tuberculosis	87
Typhoid fever	3
Whooping cough	61

VERMONT.

Chicken pox	10
Diphtheria	2
Measles	54
Mumps	2
Poliomyelitis	1
Scarlet fever	14
Smallpox	1
Whooping cough	17

VIRGINIA.

Smallpox:	
Fairfax County	1
King and Queen County	1

WASHINGTON.

Chicken pox	77
Diphtheria	29
Measles	74
Mumps	24
Poliomyelitis—King County	1
Rocky Mountain spotted fever—Odessa	3
Scarlet fever	40
Smallpox	38
Tuberculosis	57
Typhoid fever	2
Whooping cough	7

WEST VIRGINIA.

Diphtheria	2
Scarlet fever	10
Smallpox	1

WISCONSIN.

Milwaukee:	
Chicken pox	131
Diphtheria	14
Measles	26
Ophthalmia neonatorum	1

WISCONSIN—continued.

Milwaukee—Continued.	Cases.
Pneumonia	2
Scarlet fever	14
Smallpox	2
Tuberculosis	20
Whooping cough	35
Scattering:	
Chicken pox	122
Diphtheria	27
German measles	40
Influenza	11
Lethargic encephalitis	2
Measles	197
Pneumonia	18
Scarlet fever	136

WISCONSIN—continued.

Scattering—Continued.	Cases.
Smallpox	60
Tuberculosis	38
Typhoid fever	4
Whooping cough	86

WYOMING.

Chicken pox	12
Diphtheria	3
Measles	61
Mumps	14
Pneumonia	4
Rocky Mountain spotted fever	6
Scarlet fever	3
Tuberculosis	1
Whooping cough	4

Report for week ended May 31, 1924.

DISTRICT OF COLUMBIA.

	Cases.
Chicken pox	22
Diphtheria	4
Influenza	2
Measles	22
Scarlet fever	25
Smallpox	4
Tuberculosis	28
Typhoid fever	2
Whooping cough	12

SUMMARY OF MONTHLY REPORTS FROM STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
May, 1924.										
Connecticut	4	126	15	* 6	625	.....	1	495	12	15
Oklahoma	.....	34	.....	.....	1,186	.....	.....	31	115	18

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES.

Diphtheria.—Thirty-four States reported 1,545 cases of diphtheria for the week ended May 24, 1924. The same States reported 1,441 cases of this disease for the week ended May 26, 1923. One hundred and one cities, situated in all parts of the United States and having an aggregate population of nearly 28,600,000, reported 922 cases of diphtheria for the week this year, and 908 cases for the corresponding week last year. The estimated expectancy for these cities was 983 cases. The estimated expectancy was based on the experience of the last nine years, excluding epidemics.

Measles.—Twenty-nine States reported 10,027 cases of measles for the week in 1924 and 23,979 cases for the corresponding week in 1923. One hundred and one cities reported for the week 3,709 cases of measles in 1924 and 9,323 cases in 1923.

Scarlet fever.—Thirty-four States reported 2,663 cases of scarlet fever for the week ended May 24, 1924, and 2,758 cases for the week ended May 26, 1923. The reports for the week from 101 cities were as follows: This year, 1,299 cases; last year, 1,436 cases; estimated expectancy, 869 cases.

Smallpox.—Some improvement is noted in the smallpox reports, but the number of cases is still much too high, in view of the fact that the means for controlling this disease are well known. Thirty-four States reported 1,134 cases of smallpox for the week this year and 541 cases for the corresponding week of last year. One hundred and one cities reported this disease for the week as follows: 1924, 404 cases; 1923, 164 cases; estimated expectancy, 181 cases. During the four weeks ended May 24, 64 deaths from smallpox were registered in Detroit, Mich.

Typhoid fever.—Thirty-three States reported 263 cases of typhoid fever for the week ended May 24, 1924, and 221 cases for the week ended May 26, 1923. The reports for the week from 101 cities were, this year, 76 cases; last year, 73 cases; estimated expectancy, 81 cases.

Influenza and pneumonia.—During April and May there was a decline in the number of deaths from influenza and pneumonia. For the week ended May 24, 1924, 101 cities reported 682 deaths from these diseases combined. For the corresponding week of 1923 they reported 644 deaths from these causes.

City reports for week ended May 24, 1924.

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
NEW ENGLAND.										
Maine:										
Lewiston	0	0	1	0	0	16	0	0	5	1
Portland	7	2	3	0	0	3	34	5	2	1
New Hampshire:										
Concord	0	1	0	0	0	14	0	0	1	0
Nashua	0	0	0	0	0	0	0	0	1	0
Vermont:										
Barre	0	0	0	0	0	0	0	1	1	0
Burlington	0	1	1	0	0	12	1	2	1	0

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
NEW ENGLAND—continued										
Massachusetts:										
Boston	29	53	57	0	0	183	13	14	43	81
Fall River	0	2	4	0	0	12	4	3	3	3
Springfield	0	3	2	1	1	34	0	0	6	8
Worcester	10	4	6	0	0	12	19	6	6	11
Rhode Island:										
Pawtucket	0	1	3	0	0	0	0	2	1	3
Providence	0	9	11	0	0	1	0	2	9	33
Connecticut:										
Bridgeport	1	5	3	0	0	1	0	0	4	8
Hartford	7	6	4		1	39	17	2	2	6
New Haven	4	4	1	0	0	11	33	1	3	11
MIDDLE ATLANTIC.										
New York:										
Buffalo	0	13	5	0	0	28	0	6	20	15
New York	173	300	236	5	7	1,135	212	174	172	207
Rochester	10	9	1	1	1	29	24	3	11	14
Syracuse	20	7	12	0	0	41	8	2	11	33
New Jersey:										
Camden		4	3	0	0	2		1	3	7
Newark	26	16	13	1	1	149	83	11	15	23
Trenton	4	5	3	0	0	17	3	2	2	3
Pennsylvania:										
Philadelphia	49	63	50		1	150	127	52	66	70
Pittsburgh	61	21	15	0	0	18	136	34	21	31
Reading	6	2	2	0	0	2	27	0	1	3
EAST NORTH CENTRAL.										
Ohio:										
Cincinnati	5	11	3		1	69	18	8	10	8
Cleveland	64	19	16	1	3	161	229	12	23	14
Columbus	12	3	3		1	7	2	4	5	21
Toledo	27	4	5	0	0	111	0	6	10	22
Indiana:										
Fort Wayne	6	3	5	0	0	42	0	1	1	7
Indianapolis		7	3	0	0	57		6	16	2
South Bend		0	4	0	0	10		1	2	9
Terre Haute	10	1	0	0	0	2	0	2	3	0
Illinois:										
Chicago	84	115	76	10	4	324	100	56	85	114
Cicero	1	2	0	0	0	3	10	0	1	0
Springfield		1	0	1	0	4		2	2	1
Michigan:										
Detroit	60	56	42	0	0	150	89	36	62	76
Flint	24	4	4	2	0	3	15	0	5	3
Grand Rapids	9	3	2	0	0	5	23	0	5	8
Wisconsin:										
Madison	16	0	0	0	0	0	4	1	1	1
Milwaukee	99	11	16	1	2	33	34	0	26	10
Racine	3	1	0	0	0	3	0	4	4	5
Superior		1	1	0	0	0		3	1	0
WEST NORTH CENTRAL.										
Minnesota:										
Duluth	4	1	1	0	0	6	1	2	4	13
Minneapolis	56	14	10	0	0	16	5	7	25	41
St. Paul		12	40	0	0	8		1	16	22
Iowa:										
Des Moines	2	2	3	0		1	0		7	4
Sioux City	0	1	0	0		0	0		2	1
Waterloo	5	0	0	0		0	12		3	2
Missouri:										
Kansas City	13	7	3	3	3	16	27	8	8	10
St. Joseph	5	1	2	0	0	4	4	2	1	0
St. Louis	40	42	41	0	0	58	39		23	83

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
WEST NORTH CENTRAL—Con.										
North Dakota:										
Fargo	0	0	0	0	0	0	0	2	0	0
Grand Forks	0	1	1	0	0	4	0	0	0	0
South Dakota:										
Aberdeen	0	----	0	0	----	28	0	----	----	0
Sioux Falls	0	0	0	0	0	0	0	0	1	1
Nebraska:										
Lincoln	----	1	4	0	0	3	----	0	2	1
Omaha	9	3	4	0	0	9	0	12	8	3
Kansas:										
Topeka	6	2	3	0	0	3	5	1	2	3
Wichita	8	1	1	0	0	4	29	3	2	3
SOUTH ATLANTIC.										
Delaware:										
Wilmington	----	1	16	----	----	21	----	----	4	23
Maryland:										
Baltimore	77	17	14	7	1	220	41	26	21	55
Cumberland	----	1	1	0	0	0	----	0	1	0
Frederick	0	0	0	0	0	0	0	0	0	8
District of Columbia:										
Washington	40	10	7	1	1	18	----	8	13	35
Virginia:										
Lynchburg	0	0	0	0	0	0	3	1	1	0
Norfolk	8	1	0	0	0	24	6	3	2	1
Richmond	7	1	1	----	1	140	2	1	2	3
Roanoke	1	1	1	----	1	3	1	----	1	4
West Virginia:										
Charleston	0	1	0	0	0	11	1	2	1	0
Huntington	0	0	1	0	0	0	0	2	1	0
Wheeling	2	1	1	0	0	10	2	4	1	5
North Carolina:										
Raleigh	5	1	0	0	0	10	0	5	0	0
Wilmington	4	1	0	0	0	22	4	1	1	0
Winston-Salem	----	1	0	0	0	0	----	4	1	11
South Carolina:										
Charleston	0	1	0	0	0	0	3	2	0	0
Columbia	3	1	2	0	0	2	18	0	0	0
Greenville	0	0	0	0	0	2	0	0	0	0
Georgia:										
Atlanta	1	2	2	2	1	0	5	4	3	7
Brunswick	0	0	0	0	0	0	1	0	0	0
Savannah	0	0	1	----	1	1	0	3	1	0
Florida:										
St. Petersburg	0	----	0	0	0	0	0	0	----	1
Tampa	0	2	0	0	0	0	0	0	1	0
EAST SOUTH CENTRAL										
Kentucky:										
Covington	1	1	1	0	0	11	1	0	1	1
Lexington	1	1	0	0	0	10	0	1	1	3
Louisville	1	4	0	----	1	6	6	9	4	1
Tennessee:										
Memphis	14	2	3	0	0	17	37	9	4	5
Nashville	1	0	0	----	1	6	0	5	2	0
Alabama:										
Birmingham	18	1	2	6	1	8	22	6	1	2
Mobile	0	1	2	0	0	7	0	0	0	0
Montgomery	----	0	0	0	0	1	----	3	1	0

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith	2	1	0	0		2	1		1	1
Little Rock	1	1	0	0	0	6	2	3	1	1
Louisiana:										
New Orleans	9	6	8	2	0	16	0	7	1	7
Shreveport	2		0	0	0	0	0	1		0
Oklahoma:										
Oklahoma	0	1	0	0	0	0	0	6	2	1
Tulsa	4	1	0	0	0	2	2	0	0	0
Texas:										
Dallas	14	3	7		1	9	20	6	1	2
Galveston	0	1	0	0	0	0	0	1	0	0
Houston		1	3	0	0	0		3	1	3
San Antonio	0	2	0	0	0	0	0	6	1	0
MOUNTAIN.										
Montana:										
Billings	3	0	0	0	0	5	0	0	1	0
Great Falls	0	2	1	0	0	2	0	0	1	3
Helena	0		0	0	0	0	0	2		0
Missoula	0	0	0	0	0	0	0	1	1	1
Idaho:										
Boise	4	1	0	0	0	1	0	0	1	0
Colorado:										
Denver	24	9	24		1	49	9	5	9	24
Pueblo	0	1	1	0	0	3	2	1	1	0
New Mexico:										
Albuquerque	0	1	0	0	0	8	0	2	1	0
Utah:										
Salt Lake City	22	3	4	0	0	18	2	1	4	2
Nevada:										
Reno	0	0	0	0	0	1	0	1	0	0
PACIFIC.										
Washington:										
Seattle	44	5	5	0		3	7		6	16
Spokane	60	3	2	0		16	0		3	19
Tacoma	14	2	0	0		1	2		1	4
Oregon:										
Portland	8	3	2	0	0	5	5	3	8	7
California:										
Los Angeles	54	21	58	10	2	141	9	10	11	33
Sacramento	2	2	10		1	13	0	2	1	0
San Francisco	40	19	49	2	0	24	33	3	14	20

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
NEW ENGLAND.										
Maine:										
Lewiston	33,790	0	0	0	0	0	0	0	0	10
Portland	73,129	0	0	0	2	1	0	0	5	17
New Hampshire:										
Concord	22,408	0	0	0	1	0	0	0	0	7
Nashua	29,234	0	0	0	0	0	0	0	0	11
Vermont:										
Barre	[1] 10,008	0	0	0	0	0	0	0	0	2
Burlington	23,613	0	1	0	2	0	0	0	0	11
Massachusetts:										
Boston	770,400	0	0	0	18	2	1	0	24	203
Fall River	120,912	0	0	0	5	1	1	0	4	31
Springfield	144,227	0	0	0	3	0	0	0	0	26
Worcester	191,927	0	0	0	3	0	0	0	6	61
Rhode Island:										
Pawtucket	68,799	0	0	0	0	0	0	0	0	16
Providence	242,378	0	0	0	5	0	0	0	0	51
Connecticut:										
Bridgeport	[1] 143,555	0	0	0	1	0	0	0	0	32
Hartford	[1] 138,036	0	0	0	2	1	2	0	1	31
New Haven	172,967	0	0	0	0	1	2	0	1	27
MIDDLE ATLANTIC.										
New York:										
Buffalo	536,718	1	0	0	16	1	0	0	37	122
New York	5,927,625	0	0	0	[2] 110	9	14	0	178	1,398
Rochester	317,867	0	0	0	3	0	2	0	6	70
Syracuse	184,511	0	0	0	2	0	1	0	0	47
New Jersey:										
Camden	124,157	0	0	0	2	0	2	0	----	30
Newark	438,699	0	0	0	7	0	0	0	50	92
Trenton	127,390	0	0	0	2	1	1	0	8	35
Pennsylvania:										
Philadelphia	1,922,788	1	0	0	54	8	4	1	62	450
Pittsburgh	615,442	0	1	0	7	1	0	0	45	154
Reading	110,917	0	0	0	0	1	0	1	15	36
EAST NORTH CENTRAL.										
Ohio:										
Cincinnati	406,312	1	10	0	13	1	0	1	9	121
Cleveland	888,519	1	1	0	24	2	0	0	86	186
Columbus	261,082	1	1	0	4	0	0	0	3	57
Toledo	268,338	3	29	1	4	1	0	0	11	69
Indiana:										
Fort Wayne	93,573	4	5	0	4	0	1	0	2	25
Indianapolis	342,718	10	35	0	9	1	1	0	----	77
South Bend	76,709	0	1	0	2	0	0	0	----	11
Terre Haute	68,939	1	2	0	1	0	0	1	0	13
Illinois:										
Chicago	2,886,121	2	7	0	48	4	3	1	41	706
Cicero	55,968	0	0	0	2	0	0	0	4	5
Springfield	61,833	0	0	0	0	0	0	0	----	19
Michigan:										
Detroit	995,668	8	113	27	20	3	1	1	45	282
Flint	117,968	1	2	0	0	0	0	0	3	13
Grand Rapids	145,947	1	0	0	1	1	0	0	4	18
Wisconsin:										
Madison	42,519	1	0	0	1	0	0	0	17	7
Milwaukee	484,595	5	0	0	5	1	1	0	19	98
Racine	64,393	1	1	0	0	0	0	0	0	9
Superior	[1] 39,671	2	3	0	0	0	0	0	----	6
WEST NORTH CENTRAL.										
Minnesota:										
Duluth	106,289	2	3	0	4	1	0	0	2	29
Minneapolis	409,125	22	4	0	11	1	4	0	----	98
St. Paul	241,891	7	9	0	2	0	0	0	----	61

[1] Population Jan. 1, 1920.

[2] Pulmonary only.

City reports for week ended May 24, 1924.—Continued.

Division, State, and city.	Poupulation, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
WEST NORTH CENTRAL—contd.										
Iowa:										
Des Moines	140,923	2	1	----	----	0	0	----	0	----
Sioux City	79,662	2	0	----	----	0	0	----	0	----
Waterloo	39,667	0	0	----	----	1	0	----	5	----
Missouri:										
Kansas City	351,819	9	0	0	5	1	1	0	7	97
St. Joseph	78,232	8	0	0	1	0	0	0	0	21
St. Louis	803,853	6	5	0	11	4	2	0	33	200
North Dakota:										
Fargo	24,841	0	0	0	----	0	0	0	0	6
Grand Forks	14,547	0	0	----	----	0	0	----	0	----
South Dakota:										
Aberdeen	15,829	----	0	----	----	----	0	----	6	----
Sioux Falls	29,206	1	0	0	0	0	0	0	1	6
Nebraska:										
Lincoln	58,761	3	0	0	2	0	0	0	----	16
Omaha	204,382	8	3	0	3	1	0	0	1	50
Kansas:										
Topeka	52,555	3	0	0	1	0	1	0	0	16
Wichita	79,261	6	2	0	1	0	0	0	8	26
SOUTH ATLANTIC.										
Delaware:										
Wilmington	117,728	0	----	----	----	0	----	----	----	----
Maryland:										
Baltimore	773,580	0	1	0	20	4	1	0	25	213
Cumberland	32,361	0	0	0	0	0	0	0	----	10
Frederick	11,301	0	0	0	0	0	0	0	0	5
District of Columbia:										
Washington	[1] 437,571	1	7	0	12	3	1	0	11	121
Virginia:										
Lynchburg	30,277	0	0	0	0	1	0	0	5	11
Norfolk	159,089	0	0	0	2	1	0	0	4	----
Richmond	181,044	1	1	0	3	1	0	0	6	54
Roanoke	55,502	1	0	0	2	0	0	0	0	18
West Virginia:										
Charleston	45,597	0	0	0	0	0	0	1	0	17
Huntington	57,918	0	0	0	4	1	0	0	0	17
Wheeling	[1] 56,208	0	0	0	0	0	4	0	2	17
North Carolina:										
Raleigh	29,171	0	6	0	0	0	2	0	0	16
Wilmington	35,719	0	0	0	1	1	0	0	1	12
Winston-Salem	56,230	2	3	0	2	0	0	0	----	16
South Carolina:										
Charleston	71,245	0	5	0	4	1	0	0	0	35
Columbia	39,688	0	0	0	2	0	7	0	2	27
Greenville	25,789	0	2	0	0	1	0	0	0	8
Georgia:										
Atlanta	222,963	5	29	0	6	1	1	0	2	68
Brunswick	15,937	0	0	0	0	1	1	0	0	2
Savannah	89,448	0	0	0	2	0	0	0	0	28
Flordia:										
St. Petersburg	24,403	----	0	0	0	----	0	0	0	6
Tampa	56,050	0	0	0	1	1	1	0	0	16
EAST SOUTH CENTRAL.										
Kentucky:										
Covington	57,877	0	0	0	2	0	1	0	0	16
Lexington	43,673	0	0	0	1	0	0	0	0	14
Louisville	257,671	1	0	0	10	2	1	0	1	99
Tennessee:										
Memphis	170,067	3	0	0	7	1	1	0	1	46
Nashville	121,128	1	2	0	3	1	0	0	1	46
Alabama:										
Birmingham	195,901	2	31	0	8	2	1	1	2	67
Mobile	63,858	1	0	0	2	0	2	0	0	20
Montgomery	45,383	1	0	0	1	0	0	0	----	17

[1] Population Jan. 1, 1920.

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith	30,635	0	0	----	----	0	0	----	0	----
Little Rock	70,916	0	1	0	3	0	2	0	0	----
Louisiana:										
New Orleans	404,575	3	0	0	13	3	1	1	4	148
Shreveport	54,590	----	4	0	1	----	0	0	0	20
Oklahoma:										
Oklahoma	101,150	5	1	0	0	0	0	0	----	22
Tulsa	102,018	4	1	0	0	0	3	1	5	----
Texas:										
Dallas	177,274	3	0	0	4	1	0	0	7	44
Galveston	46,877	0	0	0	0	1	0	0	0	19
Houston	154,970	0	0	0	2	1	2	1	----	39
San Antonio	184,727	0	1	0	7	1	0	0	0	65
MOUNTAIN.										
Montana:										
Billings	16,927	0	2	0	0	0	0	0	0	7
Great Falls	27,787	3	0	0	1	0	0	0	6	20
Helena	[1] 12,037	----	0	0	0	----	0	0	0	7
Missoula	[1] 12,668	0	0	0	1	0	0	0	0	4
Idaho:										
Boise	22,806	1	1	0	0	0	0	0	2	6
Colorado:										
Denver	272,031	10	0	0	12	0	0	0	39	72
Pueblo	43,519	0	0	0	0	0	1	1	0	7
New Mexico:										
Albuquerque	16,648	0	0	0	6	0	0	0	0	9
Utah:										
Salt Lake City	126,241	4	0	0	2	1	1	0	6	30
Nevada:										
Reno	12,429	1	0	0	0	0	0	0	0	5
PACIFIC.										
Washington:										
Seattle	[1] 315,685	8	0	----	----	0	0	----	4	----
Spokane	104,573	10	11	----	----	0	0	----	1	----
Tacoma	101,731	3	2	----	----	0	0	----	0	----
Oregon:										
Portland	273,621	6	5	0	4	1	0	0	2	71
California:										
Los Angeles	666,853	2	91	0	25	1	1	1	8	227
Sacramento	69,950	0	0	0	2	0	1	0	0	23
San Francisco	539,038	0	0	0	11	1	0	1	1	115

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis).		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, estimated expectancy.	Cases.	Deaths.
NEW ENGLAND.									
New Hampshire:									
Nashua	0	1	0	0	0	0	0	0	0
Massachusetts:									
Boston	0	0	0	0	1	0	0	1	0
Worcester	0	2	0	0	0	0	0	0	0
Rhode Island:									
Pawtucket	0	0	0	0	0	0	0	1	0
Connecticut:									
Bridgeport	0	0	1	1	0	0	0	0	0
Hartford	0	0	1	0	0	0	0	0	0

[1] Population January 1, 1920.

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis.		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, estimated expectancy.	Cases.	Deaths.
MIDDLE ATLANTIC									
New York:									
New York	3	3	22	9	0	0	2	1	1
New Jersey:									
Newark	1	0	2	0	0	0	1	0	0
Pennsylvania:									
Philadelphia	1	0	0	1	0	0	0	0	0
EAST NORTH CENTRAL.									
Illinois:									
Chicago	1	1	1	0	0	0	0	0	0
Michigan:									
Detroit	1	0	0	1	0	0	0	0	0
Wisconsin:									
Milwaukee	1	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL.									
Missouri:									
Kansas City	0	0	1	1	0	0	0	0	0
SOUTH ATLANTIC.									
Maryland:									
Baltimore	0	1	1	0	0	0	0	0	0
District of Columbia:									
Washington	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston	0	0	0	0	0	1	0	0	0
Columbia	0	0	0	0	0	2	0	0	0
Georgia:									
Atlanta	1	0	0	0	0	0	0	0	0
Savannah	0	0	0	0	0	1	0	0	0
Florida:									
Tampa	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL.									
Alabama:									
Mobile	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL.									
Louisiana:									
New Orleans	0	0	1	1	0	0	0	0	0
Texas:									
Houston	0	0	0	0	0	1	0	0	0
San Antonio	1	1	0	0	0	0	0	0	0
PACIFIC.									
California:									
Los Angeles	2	0	0	0	0	0	0	0	0

The following table gives a summary of the reports from 105 cities for the nine-week period ended May 24, 1924. The cities included in this table are those whose reports have been published for all nine weeks in the Public Health Reports. Eight of these cities did not report deaths. The aggregate population of the cities reporting cases was estimated at nearly 29,000,000 on July 1, 1923, which is the latest date for which estimates are available. The cities reporting deaths had more than 28,000,000 population on that date. The number of cities included in each group and the aggregate population are shown in a separate table below.

Summary of weekly reports from cities, March 23 to May 24, 1924.

DIPHTHERIA CASES.

	1924, week ended—								
	Mar. 29.	Apr. 5.	Apr. 12.	Apr. 19.	Apr. 26.	May 3.	May 10.	May 17.	May 24.
Total	1,038	1,039	1,006	1,009	988	912	892	929	941
New England	103	105	102	99	111	97	83	78	94
Middle Atlantic	391	383	384	374	400	344	395	357	340
East North Central	200	219	210	211	156	173	157	168	175
West North Central	66	74	60	60	71	68	64	110	106
South Atlantic	42	61	52	52	50	[1] 40	[1] 31	[1] 41	46
East South Central	10	17	8	14	13	6	8	3	8
West South Central	32	23	24	31	33	18	26	16	18
Mountain	31	30	40	52	31	35	29	18	30
Pacific	163	127	126	116	123	131	99	138	124

MEASLES CASES.

Total	6,590	6,070	6,237	5,147	5,203	4,729	4,420	4,017	3,732
New England	443	374	401	353	354	379	339	271	310
Middle Atlantic	2,354	2,394	2,647	2,347	2,184	2,310	1,889	1,868	1,571
East North Central	674	806	838	675	829	703	862	781	873
West North Central	766	569	415	359	350	257	274	197	128
South Atlantic	621	572	626	487	518	[1] 484	[1] 455	[1] 463	484
East South Central	173	126	156	159	173	98	73	56	56
West South Central	590	354	323	188	127	104	71	51	33
Mountain	444	405	241	179	193	113	97	100	79
Pacific	525	470	590	400	475	281	360	230	198

SCARLET FEVER CASES.

Total	1,966	1,737	1,796	1,658	1,532	1,612	1,555	1,508	1,330
New England	363	312	326	253	271	242	210	213	165
Middle Atlantic	532	517	498	474	467	473	470	452	406
East North Central	370	346	345	334	284	325	318	336	279
West North Central	254	184	230	222	195	197	219	223	182
South Atlantic	202	200	218	189	168	[1] 178	[1] 165	[1] 123	153
East South Central	30	11	18	16	12	16	19	9	9
West South Central	17	15	26	27	18	23	15	14	14
Mountain	28	16	20	19	23	27	37	25	30
Pacific	170	136	115	124	94	131	102	113	92

SMALLPOX CASES.

Total	602	544	536	467	568	549	469	529	408
New England	0	0	1	1	0	0	0	0	0
Middle Atlantic	6	1	1	0	0	0	0	5	1
East North Central	162	153	141	164	193	186	165	213	181
West North Central	72	52	61	41	62	53	33	39	26
South Atlantic	171	116	98	93	98	[1] 76	[1] 95	[1] 51	[1] 54
East South Central	38	49	45	26	55	49	20	54	33
West South Central	7	10	4	5	2	4	1	7	6
Mountain	7	8	4	10	6	5	6	6	3
Pacific	139	155	181	127	152	176	140	154	104

TYPHOID FEVER CASES.

Total	76	51	52	55	58	49	68	73	79
New England	4	1	4	4	7	4	9	2	6
Middle Atlantic	26	9	21	17	11	10	25	32	24
East North Central	7	7	7	7	10	11	9	12	7
West North Central	5	7	2	6	1	3	2	3	8
South Atlantic	11	9	10	4	8	[1] 11	[1] 11	[1] 8	[1] 19
East South Central	10	1	1	4	8	3	3	7	6
West South Central	8	9	2	4	6	3	3	3	5
Mountain	1	2	1	4	0	1	3	0	2
Pacific	4	6	4	5	7	3	3	6	2

[1] Figures for Wilmington, Del., estimated.

Summary of weekly reports from cities, March 23 to May 24, 1924—Continued.

INFLUENZA DEATHS.

	1924, week ended—								
	Mar. 29.	Apr. 5.	Apr. 12.	Apr. 19.	Apr. 26.	May 3.	May 10.	May 17.	May 24.
Total	96	97	95	80	72	51	60	49	40
New England	3	6	3	3	3	2	2	1	2
Middle Atlantic	45	44	35	31	30	21	32	25	10
East North Central	11	20	25	14	12	7	10	5	11
West North Central	4	2	8	4	4	3	3	4	3
South Atlantic	10	3	7	6	10	[1] 5	[1] 7	[1] 5	[1] 6
East South Central	8	13	6	11	8	3	4	4	3
West South Central	10	6	3	4	3	4	0	3	1
Mountain	2	1	2	4	2	0	1	1	1
Pacific	3	2	6	3	0	6	1	1	3

PNEUMONIA DEATHS.

Total	1,204	1,251	1,222	1,101	959	938	785	746	647
New England	58	75	71	61	63	69	55	52	36
Middle Atlantic	525	500	494	474	430	392	332	343	285
East North Central	255	286	258	232	170	199	150	139	136
West North Central	72	71	74	64	49	53	42	41	38
South Atlantic	111	125	158	118	114	[1] 100	[1] 96	[1] 89	[1] 67
East South Central	47	61	53	57	42	44	29	22	32
West South Central	61	67	43	43	35	24	25	27	27
Mountain	37	39	32	25	26	27	24	13	11
Pacific	38	27	39	27	30	30	32	20	15

[1] Figures for Wilmington, Del., estimated.

Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1923.

Group of cities.	Number of cities reporting cases.	Number of cities reporting deaths	Aggregate population of cities reporting cases.	Aggregate population of cities reporting deaths.
Total	105	97	28,898,350	28,140,934
New England	12	12	2,008,746	2,008,746
Middle Atlantic	10	10	10,304,114	10,304,114
East North Central	17	17	7,032,535	7,032,535
West North Central	14	11	2,515,330	2,381,454
South Atlantic	22	22	2,566,901	2,566,901
East South Central	7	7	911,885	911,885
West South Central	8	6	1,124,564	1,023,013
Mountain	9	9	546,445	546,445
Pacific	6	3	1,797,830	1,275,841

FOREIGN AND INSULAR.

BOLIVIA.

Communicable Diseases—La Paz—April, 1924.

During the month of April, 1924, communicable diseases were reported at La Paz, Bolivia, as follows:

Disease.	Cases.	Deaths.	Disease.	Cases.	Deaths.
Cerebrospinal meningitis		3	Tuberculosis	26	7
Scarlet fever	10	12	Typhoid fever	2	1
Smallpox	4	6	Typhus fever	10	1

Population, officially estimated, 100,000.

Dysentery.

During the same period eight cases of dysentery, with six deaths, were reported at La Paz, Bolivia.

BRITISH GUIANA.

Deaths and Death Rates, 1921 and 1922.

A report from Georgetown, British Guiana, gives the following figures from the Surgeon General's Department.

It is stated that the inhabited portions of the colony are the lowlands near the coast and that the highlands of the interior are practically undeveloped and uninhabited.

Deaths and death rates in British Guiana, 1921 and 1922.

	1921	1922		1921	1922
Population	298,188	297,817	Death rates per 1,000 population—Continued.		
Births registered	10,287	8,274	Pneumonia and bronchitis	3.6	4.0
Birth rate per 1,000 population	34.5	27.8		3.2	3.0
Deaths registered	9,200	8,663	Kidney diseases		
Death rate per 1,000 population	30.9	29.1	Diseases of early infancy, including premature birth, icterus, etc.	2.2	2.7
Infant mortality per 1,000 registered births	195	186		1.3	1.5
Death rates per 1,000 population:			Tuberculosis (all forms)	.3	.8
Bowel complaints (other than enteric fever)	4.0	4.6	Influenza	.4	.4
Malaria	4.3	3.7	Enteric fever	.2	.3
			Filariasis		

CANARY ISLANDS.

Plague—Santa Cruz de Teneriffe.

Under date of May 16, 1924, the occurrence of two cases of plague with one death was reported at Santa Cruz de Teneriffe, Canary Islands. Of these, one case, which terminated fatally, was septicemic, and one bubonic.

CHILE.

Mortality—Concepcion—April, 1924.

During the month of April, 1924, 247 deaths (including 16 stillbirths), of which 94 occurred in children under 1 year of age, were notified at Concepcion, Chile (population, 64,780). The principal causes of death were stated as follows: Broncho-pneumonia, 8 deaths; meningitis, 5; heart disease, 15; pneumonia, 69; tuberculosis, 26; typhoid fever, 2; typhus fever, 3.

CZECHOSLOVAKIA.

Communicable Diseases—January-March, 1924.

During the period January to March, 1924, inclusive, communicable diseases were notified in Czechoslovakia as follows:

Disease.	Cases.	Deaths.	Provinces reporting greatest number of cases and deaths.
Cerebrospinal meningitis	22	11	Bohemia: Cases, 12; deaths, 6.
Diphtheria	944	69	Bohemia: Cases, 486; deaths, 35.
Scarlatina	2,770	156	Bohemia: Cases, 905; deaths, 43.
Smallpox	1		Russinia.
Trachoma	766		Slovakia: Cases, 438.
Typhoid fever	[1] 1,209	112	Bohemia: Cases, 421; deaths, 40.
Typhus fever	30	2	Russinia: Cases, 25; deaths, 1.

Population, 13,595,816.

[1] Paratyphoid, A, 2 cases, in Silesia. Paratyphoid, B, 11; Bohemia, 9; Silesia, 2.

Anthrax—Dysentery—Malaria—Rabies.

During the same period 6 cases of anthrax with 1 death, 103 cases of dysentery with 5 deaths, 3 cases of malaria, and 4 deaths from rabies were reported in Czechoslovakia.

ESTHONIA.

Communicable Diseases—March, 1924.

During the month of March, 1924, communicable diseases were reported in the Republic of Esthonia as follows:

Disease.	Cases.	Disease.	Cases.
Diphtheria	45	Tuberculosis	234
Measles	4	Typhoid fever	53
Scarlet fever	57	Typhus fever	11
Smallpox	2		

Population, officially estimated, 1,109,479.

Leprosy—Paratyphus Fever.

During the same period 5 new cases of leprosy and 15 new cases of paratyphus fever were reported in the Republic of Esthonia.

GREAT BRITAIN.

Births and Deaths—England and Wales—January to March, 1924.

The following tables have been prepared from figures given in Quarterly Return No. 301, issued by the registrar general of England and Wales.

The figures are provisional and subject to correction. The rates were calculated on an annual basis. The entire population was included in the computations for England and Wales, but civilians only in those for groups of towns.

Births registered during the quarter numbered 185,486, which was 7,484 less than in the corresponding quarter of 1923. The deaths registered numbered 160,279, which was 35,559 more than in the corresponding quarter of 1923.

Birth and death rates, England and Wales, January to March, inclusive, 1924.

	England and Wales.	105 county boroughs and great towns.	157 smaller towns.
Birth rates per 1,000 population	19.4	20.0	19.3
Death rates per 1,000 population:			
All causes	16.7	17.0	15.4
Typhoid fever	.01	.01	.01
Measles	.18	.29	.09
Scarlet fever	.03	.03	.03
Whooping cough	.19	.20	.21
Diphtheria	.08	.10	.08
Influenza	1.32	1.23	1.32
Death rates per 1,000 births:			
Diarrhea and enteritis (under 2 years)	5.6	6.7	5.6
Total under 1 year	102	107	99

Populations (estimated as of July 1, 1923): England and Wales, 38,403,000; 105 county boroughs and great towns, 19,263,854; 157 smaller towns (20,000-50,000), 4,962,447.

Cases of Communicable Diseases Reported in England and Wales During the 13 Weeks Ended March 29, 1924.

Diphtheria	9,487	Scarlet fever	18,958
Ophthalmia neonatorum	1,529	Smallpox	1,003
Pneumonia	26,384	Typhoid fever	590
Puerperal fever	571		

Lethargic Encephalitis.

The figures given in the following table are taken from the weekly returns issued by the Registrar General of England and Wales:

Cases of lethargic encephalitis reported in England and Wales during the first 19 weeks of 1924 and 1923.

Week ended—	Cases.	Week ended—	Cases.
1924.		1923.	
Jan. 5	10	Jan. 6	13
Jan. 12	10	Jan. 13	9
Jan. 19	18	Jan. 20	19
Jan. 26	18	Jan. 27	25
Feb. 2	19	Feb. 3	30
Feb. 9	37	Feb. 10	37
Feb. 16	33	Feb. 17	40
Feb. 23	61	Feb. 24	44
Mar. 1	86	Mar. 3	40
Mar. 8	97	Mar. 10	53
Mar. 15	88	Mar. 17	
Mar. 22	126	Mar. 24	48
Mar. 29	157	Mar. 31	50
Apr. 5	190	Apr. 7	33
Apr. 12	206	Apr. 14	29
Apr. 19	253	Apr. 21	33
Apr. 26	212	Apr. 28	35
May 3	278	May 5	25
May 10	290	May 12	21

HAWAII.

Plague-Infected Rodent—Vicinity of Honokaa.

A plague-infected rodent was reported found, May 10, 1924, in the vicinity of Honokaa, Hawaii.

LATVIA.

Communicable Diseases—March, 1924.

Communicable diseases were reported in the Republic of Latvia during the month of March, 1924, as follows:

Disease.	Cases.	Disease.	Cases.
Cerebrospinal meningitis	3	Smallpox	6
Diphtheria	72	Typhoid fever	82
Measles	221	Typhus fever	[1] 81
Mumps	13	Whooping cough	39
Scarlet fever	112		

[1] Paratyphus fever, 3.

Dysentery—Leprosy.

During the same period one case of dysentery and three cases of leprosy were reported in the Republic of Latvia. (Population, officially estimated, 1,900,000.)

LITHUANIA.

Communicable Diseases—March, 1924.

During the month of March, 1924, communicable diseases were notified in the Republic of Lithuania as follows:

Disease.	Cases.	Deaths.	Disease.	Cases.	Deaths.
Cerebrospinal meningitis	2		Smallpox	36	11
Diphtheria	18		Typhoid fever	50	2
Scarlet fever	17		Typhus fever	218	18

Population, census of 1923, 2,028,972.

MADAGASCAR.

Plague—March 16-31, 1924.

During the period March 16 to 31, 1924, 81 cases of plague with 79 deaths were reported in the Province of Tananarive, Island of Madagascar. For distribution of occurrence according to locality, see page 1478.

MALTA.

Communicable Diseases—April 16-30, 1924.

During the two weeks period April 16 to 30, 1924, communicable diseases were reported in the Island of Malta as follows:

Disease.	Cases.	Disease.	Cases.
Broncho-pneumonia	4	Trachoma	7
Chicken pox	1	Undulant fever	36
Influenza	3	Whooping cough	7
Measles	25		

Population, officially estimated, 216,702.

UNION OF SOUTH AFRICA.

Plague—Cape Province—Orange Free State.

During the week ended April 19, 1924, 24 new cases of plague with 10 deaths were reported in the Union of South Africa. The occurrence was in the Cape Province (Albert District), and the Orange Free State (in six districts). Of the cases, four were among the white population and 20 with 10 deaths among the native population. From the beginning of the outbreak, December 16, 1923, to April 19, 1924, 308 cases and 184 deaths have been reported (White—Cases, 45; deaths, 21: Native—Cases, 263; deaths, 163).

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended June 13, 1924.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Apr. 6-12, 1924: Cases, 11,925; deaths, 8,380.
Bombay	Apr. 13-19	1	1	
Calcutta	Apr. 6-12	225	190	
Indo-China:				
Saigon	Apr. 13-19	1	1	
Siam:				
Bangkok	do	2		

PLAGUE.

Canary Islands:				
Santa Cruz de Teneriffe	May 16	2	1	Bubonic and septicemic.
Ceylon:				
Colombo	Apr. 19-26	1	4	
Hawaii:				
Honokaa	May 10, 1924			One plague-infected rodent.
India				Apr. 6-12, 1924: Cases. 16,214; deaths, 12,580.
Bombay	Apr. 6-19	65	54	
Calcutta	Apr. 6-26	9	7	
Karachi	Apr. 27-May 3	8	11	
Madras Presidency	May 1-7	27	15	
Indo-China:				
Saigon	Apr. 13-19			One plague rodent.
Iraq (Mesopotamia):				
Bagdad	Apr. 12-19	12	9	
Madagascar:				
Tananarive Province				Mar. 16 - 31, 1924: Cases: 81; deaths, 79. Bubonic, pneumonic, septicemic.
Tananarive	Mar. 16-31	2	2	
Other localities	do	77	75	
Union of South Africa				Apr. 13 - 19, 1924: Cases, 24; deaths, 10. (White, 4 cases; native, 20 cases, 10 deaths. Occurrence in Cape Province and Orange Free State. Total: Dec. 16, 1923-Apr. 19, 1924: Cases, 308; deaths, 184; (White, cases, 45; deaths, 21. Native, cases, 263; deaths, 163.)

SMALLPOX.

Bolivia:				
La Paz	Apr. 1-30	4	6	
Brazil:				
Rio de Janeiro	Apr. 27-May 3	1	1	
Canada:				
Alberta—				
Calgary	May 18-24	1		
British Columbia—				
Vancouver	May 18-24	8		
Manitoba—				
Winnipeg	May 25-31	1		
Ontario—				
Ottawa	May 18-31	8		
Saskatchewan—				
Saskatoon	May 18-24	1		
Chile:				
Antofagasta	Apr. 27-May 3	1		
Valparaiso	Mar. 16-May 10		13	
China:				
Amoy	Apr. 20-26			Present.
Chungking	do			Stated to be endemic.
Foochow	Apr. 13-26			Present.
Hongkong	Mar. 23-29	14	12	
Nanking	Apr. 20-May 3			Present.
Shanghai	Apr. 20-26	2	1	Cases, foreign: Deaths, native and foreign.
Tientsin	Apr. 20-May 3	4		One mission hospital.

[1]From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended June 13, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Czechoslovakia				Mar. 1-31, 1924: One case.
Egypt:				
Alexandria	Apr. 20-May 6	1		
Esthonia				Mar. 1-31, 1924: Cases, 2.
Great Britain:				
Sheffield	May 11-17	2		
Greece:				
Saloniki	Mar. 24-Apr. 20	8	14	
Haiti:				
Port au Prince	Apr. 27-May 3	3		Developed at Cape Haitien.
India				Apr. 6-12, 1924: Cases, 4,007; deaths, 825.
Bombay	Apr. 6-19	260	136	
Calcutta	Apr. 6-26	10	9	
Karachi	Apr. 27-May 3	32	10	
Madras	May 1-7	13	5	
Indo-China:				
Saigon	Apr. 6-19	101	62	Including 100 square kilometers of surrounding country.
Iraq (Mesopotamia):				
Bagdad	Apr. 6-12	1		
Japan:				
Kobe	Apr. 24-29	1		
Yokohama	Apr. 21-May 4	2		
Java:				
East Java—				
Soerabaya	Mar. 23-29	44	12	
Latvia				Mar. 1-31, 1924: Cases, 6.
Lithuania				Mar. 1-31, 1924: Cases, 36; deaths, 11.
Mexico:				
Durango	Apr. 1-30		2	
Portugal:				
Lisbon	May 4-17	2		
Oporto	May 4-10	3	1	
Siam:				
Bangkok	Apr. 13-19	2		Imported.
Spain:				
Valencia	May 11-17	7	1	
Switzerland:				
Berne	May 4-10	2		
Lucerne	Apr. 1-30	21		
Zurich	May 4-10	1		
Syria:				
Damascus	Apr. 23-28	2		
Tunis:				
Tunis	May 6-19	3	1	
Union of South Africa:				
Cape Province	Apr. 13-19			Outbreaks.
Orange Free State	Apr. 3-19			Do.

TYPHUS FEVER.

Bolivia:				
La Paz	Apr. 1-30	10	1	
Bulgaria:				
Sofia				Apr. 6-19, 1924: 2 cases paratyphus fever.
Chile:				
Concepcion	Apr. 1-30		3	
Talcahuano	Apr. 27-May 3	3	2	
Czechoslovakia				Mar. 1-31, 1924: Cases, 30; deaths, 2.
Esthonia				Mar. 1-31, 1924: Cases, 11.
Latvia	March 1-31	81		Paratyphus cases, 3.
Lithuania				Mar. 1-31, 1924: Cases, 218; deaths, 18.
Palestine:				
Jerusalem	Apr. 28-May 5	2		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Hongkong	Nov. 18–24	1		
India				Oct. 14–Dec. 22, 1923: Cases, 14,117; deaths, 9,148.
Do				Dec. 30, 1923–Mar. 29, 1924: Cases, 24,499; deaths, 15,014.
Bombay	Dec. 23–29	1	1	
Do	Feb. 3–Mar. 29	18	18	
Calcutta	Nov. 11–Dec. 29	85	69	
Do	Dec. 30–Apr. 5	490	403	
Madras	Nov. 25–Dec. 29	15	5	
Do	Dec. 30–Apr. 12	26	12	
Rangoon	Nov. 11–Dec. 29	8	5	
Do	Feb. 24–Apr. 6	17	15	
Indo-China:				
Saigon	Dec. 31–Mar. 29	4	4	Including 100 square kilometers of surrounding country.
Philippine Islands:				
City—				
Manila	Feb. 3–9	1	1	
Province—				
Cebu	Mar. 2–8	1	1	
Siam:				
Bangkok	Nov. 18–Dec. 8	4	2	
Do	Dec. 31–Mar. 29	13	8	
Turkey:				
Constantinople	Dec. 2–8		1	

PLAGUE.

Azores:				
St. Michael Island	Oct. 20–Nov. 10	9	5	At localities 3 to 9 miles from port of Ponta Delgada.
Bolivia:				
La Paz	Oct. 1–31		3	
Do	Feb. 1–Mar. 31		10	
Brazil:				
Bahia	Nov. 11–Dec. 22	5	3	
Do	Dec. 30–Mar. 15	7	6	
Porto Alegre	Feb. 10–Apr. 26	3	3	
Rio de Janeiro	Jan. 20–26	1		
British East Africa:				
Kenya—				
Kisumu	Feb. 24–Mar. 8	1	1	
Mombasa	Oct. 14–20	1	1	Infected rats, ? Dec. 9–15, 1923:
Do	Dec. 30–Jan. 5	1	1	Cases, 4; [illegible] 2; removed from vessel [illegible]ved Dec. 11, 1923.
Nairobi	Nov. 1–21	40		In rural districts, several hundred.
Tanganyika				To Nov. 24, 1923: Cases, 39; deaths, 25.
Do	Jan. 27–Feb. 9	8	5	
Uganda	Aug. 1–Oct. 31	734	719	
Entebbe	Oct. 1–Dec. 31	251	239	
Do	Jan. 1–31	36	35	
Canary Islands:				
Las Palmas	Oct. 15–Nov. 15	14	14	
Santa Cruz de Teneriffe	Feb. 19–Apr. 8	5		
San Juan de la Rambla	Dec. 11	1		Locality 52 km. from Teneriffe.
Celebes Island	Mar. 30			Epidemic.
Macassar	Feb. 20–Mar. 8	11	7	Including Menado.
Ceylon:				
Colombo	Nov. 11–Dec. 29	31	21	Plague rodents, 24.
Do	Dec. 30–Apr. 19	103	95	Plague rodents, 44.
Chile:				
Antofagasta	Mar. 16–Apr. 12	10	1	
China:				
Antung	Mar. 31–Apr. 6	1		
Nanking	Dec. 16–29			Present.
Do	Dec. 30–Apr. 5			Do.

[1] From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Ecuador:				
Eloy Alfaro	Mar. 16-31	1	1	
Guayaquil	Nov. 16-Dec. 31	45	13	Rats taken, 53,240; found infected, 133.
Do	Jan. 1-Apr. 30	112	35	Rats taken, 119,457; found infected, 520.
Jipijapa	Nov. 16-Dec. 15			Present.
Posorja	Apr. 1-30	6	1	
Quevedo	Jan. 1-31	3	2	
Quito	Nov. 1-30	11	1	
Santa Rosa	Feb. 16-29			Do.
Vino del Milagro	Dec. 1-15	1		
Egypt				Jan. 1-Dec. 31, 1923: Cases, 1,519; deaths, 725. Jan. 1-May 1, 1924: Cases, 264; deaths, 149.
City—				
Alexandria	Year 1923	65	33	
Do	Apr. 2	1	1	
Cairo	Year 1923	2	2	
Port Said	do	51	29	
Do	Apr. 24	1		
Suez	Year 1923	46	24	
Do	Jan. 2-Apr. 28	14	7	
Province—				
Assiout	Year 1923	370	211	
Do	Apr. 1-May 1	27	19	
Beni-Souef	Year 1923	63	23	
Charkieh	Jan. 31-Mar. 27	3	3	
Dakhalieh	Year 1923	2	2	
Fayoum	do	34	9	
Do	Feb. 18-May 1	48	10	
Gharbieh	Year 1923	23	9	
Do	Apr. 21	1	1	
Girgeh	do	337	193	
Do	Jan. 17-Apr. 25	14	6	
Gizeh	Year 1923	3	4	
Kalioubiah	do	76	10	
Do	Jan. 6-Mar. 27	1		
Kena	Year 1923	50	34	
Do	Apr. 9-29	41	29	
Menoufieh	Year 1923	290	98	
Do	Jan. 2-Apr. 21	94	58	
Minia	Year 1923	106	44	
Do	Feb. 5-Apr. 8	11	9	
Greece:				
Kalamata	Apr. 18-24			Several deaths.
Patras	do			Do.
Hawaii:				
Honokaa				Jan. 8-Mar. 14, 1924: Four plague-infected rodents.
Paauhau				Dec. 14, 1923: One plague rat, Feb. 14, 1924: One plague rat.
India				Oct. 14-Dec. 29, 1923: Cases, 34,542; deaths, 23,778.
Do				Dec. 30, 1923-Mar. 29, 1924: Cases, 108,452; deaths, 82,972.
Bombay	Oct. 28-Dec. 22	5	5	Corrected report.
Do	Dec. 30-Apr. 5	246	194	
Calcutta	Dec. 23-29	1	1	
Do	Jan. 6-Apr. 5	8	7	
Karachi	Nov. 11-Dec. 29	42	33	
Do	Dec. 30-Apr. 26	83	63	
Madras Presidency	Nov. 4-Dec. 29	1,657	1,021	
Do	Jan. 27-Apr. 5	642	417	
Rangoon	Jan. 27-Feb. 16	20	15	
Do	Dec. 30-Apr. 19	169	155	
Indo-China:				
Saigon	Oct. 28-Dec. 8	19	6	Including 100 square kilometers of surrounding country.
Do	Jan. 27-Apr. 5	2	1	Do.
Iraq:				
Bagdad	Nov. 11-Dec. 29	8	6	
Do	Jan. 6-Apr. 5	55	29	Corrected report.
Java				Oct. 1-Dec. 31, 1923: Deaths, 2,908. Jan. 1-Feb. 29: Deaths, 1,732.
East Java—				
Djokjakarta	Oct. 4-Dec. 31		146	
Do	Jan. 1-Feb. 29		92	
Kedoe	Oct. 1-Dec. 31		1,287	
Do	Jan. 1-Feb. 29		626	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Java—Continued.				
East Java—Continued.				
Pasoeroean	Feb. 1-29		3	
Pekalongan	Oct. 1-Dec. 31		150	
Do	Jan. 1-Feb. 29		107	
Samarang	Oct. 1-Dec. 31		430	
Do	Jan. 1-Feb. 29		183	
Soerabaya	Oct. 1-Dec. 31		9	
Do	Jan. 1-Feb. 29		17	Plague rats, 5.
Soerakarta	Oct. 1-Dec. 31		886	
Do	Jan. 1-Feb. 29		704	Corrected report.
Madagascar:				
Tananarive Province	Oct. 1-Dec. 31	324	272	Bubonic, pneumonic, septicemic. July 1-Dec. 31, 1923—city and Province: Cases, 429; deaths, 367. Jan. 1-Mar. 15, 1924—city and Province: Cases, 648; deaths, 588.
Ambatondrazaka	Feb. 1-15	8		District. Type pneumonic.
Ambositra	Feb. 1-29	8	1	Do.
Tananarive town	Oct. 1-Dec. 31	74	74	
Do	Jan. 29-Mar. 15	41	40	
Other localities	Feb. 1-Mar. 15	338	323	
Paraguay:				
Asuncion	Dec. 18	6	4	
Peru				Nov. 1-Dec. 31, 1923; Cases, 38; deaths, 24. Jan. 1-Mar. 31; 1924: Cases, 162, deaths, 49.
Locality—				
Ayabaca	Mar. 1-31	4		
Barranco	do	1		
Callao	Jan. 1-Mar. 31	7	2	
Cañete	Nov. 1-30	1	1	
Do	Feb. 1-Mar. 31	14	5	
Casma	Mar. 1-31	2	1	
Chancay	Dec. 1-31	2		
Chepen	Nov. 1-30	1		
Chiclayo	Nov. 1-Dec. 31	2	1	
Chilca	Jan. 1-31	1		
Guadalupe	Feb. 1-Mar. 31	3	1	
Huacho	do	5	3	
Huaral	do	11	4	
Huarmey	Jan. 1-Mar. 31	22	4	
Lambayeque	Mar. 1-31	2		
Lima (city)	Nov. 1-Dec. 31	22	15	
Do	Jan. 1-Mar. 31	41	21	
Lima (country)	Nov. 1-Dec. 31	8	7	
Do	Jan. 1-Mar. 31	11	2	
Lurin	do	2		
Mollendo	do	3	2	
Moro	Mar. 1-31	7		
Paita (city)	Jan. 1-Mar. 31	1	1	
Paita (country)	do	8	1	
Reque	do	4		
Salaverry	Mar. 1-31	1		
Sullana	Jan. 1-Mar. 31	2		
Trujillo	do	12	2	Country.
Portugal:				
Lisbon	Dec. 13-21	7		
Do	Dec. 31-Jan. 6		1	
Portuguese West Africa:				
Angola—				
Loanda	Oct. 1-Dec. 29	59	29	
Do	Dec. 30-Feb. 2		4	
Russia:				
Bukeeve Province				Oct. 1, 1923-Mar. 10, 1924: Cases, 339; deaths, 315; 66 plague centers; entire southeast section, cases, 473; deaths, 435.
Ural Provinces				Oct. 1, 1923-Feb. 4, 1924: Cases, 441; 4 plague centers.
Kalmuk district	Mar. 10	3		
Novy Kazanka	Mar. 1		4	At a locality on the coast; 16 cases, 8 deaths.
Siam:				
Bangkok	Nov. 4-Dec. 8	3	2	
Do	Jan. 13-Mar. 22	5	5	
Siberia:				
Transbaikalia—				
Chita	Jan. 27	2	2	Pneumonic. Occurring in veterinary laboratory workers.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Spain:				
Malaga	Dec. 1-31	4		
Straits Settlements:				
Penang	Jan. 27-Feb. 2	1	1	
Singapore	Nov. 11-Mar. 15	4	4	
Do	Dec. 30-Apr. 12	17	13	
Syria:				
Beirut	Nov. 1-Dec. 10	3		
Do	Jan. 1-Mar. 31	3		
Turkey:				
Constantinople	Dec. 2-22	6	3	
Union of South Africa				Dec. 16, 1923-Apr. 5, 1924; Cases, 266; deaths, 159. (White, cases, 41; deaths, 20.)
Cape Province				Reported Mar. 17, 1924: Cases, 11; deaths, 7.
Uitenhage district	Dec. 9-15			Plague rodent found in vicinity Haarhoff's Kraal farm.
Orange Free State				Jan. 6-Mar. 8, 1924; cases, 132; deaths, 69.
Thaba 'Nchu				Mar. 23-29, 1924: One plague rat.
Hoopstad district	Feb. 3-9	1		
Kroonstad district	Dec. 16-27	7	3	
Do	Jan. 6-Feb. 9	43	20	
Winburg district	Feb. 3-9	1		
Wonderfontein farm	Dec. 2-8	4		Vicinity of Hoopstad. At Hoopstad, Dec. 9-15, 1923, one death of case previously reported.
Transvaal—				
Wolmaransstad district	Mar. 2-8	3	1	White, one case.
West Africa				Apr. 2, 1924: Reported present in one locality.
On vessels:				
———	Dec. 11	4	2	At Mombasa, British East Africa.
———	Jan. 24	2		At Varna, Bulgaria, from Syrian port.

SMALLPOX.

Algeria:				
Algiers	Nov. 1-30	1		
Do	Mar. 1-Apr. 30	2		
Arabia:				
Aden	Dec. 16-22	1		Imported.
Do	Jan. 13-Apr. 19	8		Four imported.
Belgium:				
Brussels	Jan. 13-Mar. 29	10		
Bolivia:				
La Paz	Oct. 1-Dec. 31	45	15	
Do	Jan. 1-Mar. 31	35	19	
Brazil:				
Bahia	Jan. 6-12	2		
Pernambuco	Nov. 4-Dec. 1	15	3	
Do	Jan. 6-Feb. 23		8	
Porto Alegre	Dec. 23-29		1	
Do	Dec. 30-Apr. 12		3	
Rio de Janeiro	Nov. 18-24	3	4	
Do	Jan. 6-Apr. 12	5	2	
Sao Paulo	Sept. 3-9	1		
British East Africa:				
Tanganyika Territory	Sept. 30-Dec. 29	30	7	
Do	Jan. 6-12	2		
Uganda	Sept. 1-30	6	1	
Entebbe	Oct. 1-Dec. 31	5	1	
Zanzibar	Sept. 1-Oct. 31	116	18	Sept. 1-30, 1923: In areas 27 miles from town of Zanzibar. Oct. 1-31, 1923: In vicinity, 1 case, 1 death. In Mikotoni district, 30 cases, 14 deaths reported.
British South Africa:				
Northern Rhodesia				Dec. 4-31, 1923: Cases, 49; deaths, 5.
Do	Feb. 26-Apr. 7	3		Jan. 1-31, 1924: Cases, 50; deaths, 11; reported from Balorale, Kalabo, and Mankoya districts.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued.

SMALLPOX—Continued.

Place	Date	Cases	Deaths	Remarks
Canada:				
Alberta—				
Calgary	Jan. 27–May 17	46		
British Columbia—				
Vancouver	Dec. 22–29	10		
Do	Dec. 30–May 17	129		
Victoria	Feb. 10–Mar. 29	3		
Manitoba—				
Winnipeg	Nov. 25–Dec. 29	21		
Do	Dec. 30–May 3	81		
New Brunswick—				
Fredericton				Feb. 1–29, 1924: Cases, 8.
Gloucester County	Mar. 2–Apr. 5	4		
Madawaska County	Dec. 8–15	1		
Restigouche County	Apr. 20–26	1		Jan. 1–Mar. 31, 1924: Cases, 5.
Victoria County	Feb. 10–16	2		
Westmoreland County	Feb. 10–Apr. 26	5		
Ontario				Jan. 1–Apr. 30, 1924: Cases, 397 deaths, 31.
Amherstburg	Mar. 1–31	16	8	
Chapleau	do	13	1	
Cochrane	do	15	5	
Essex Border	do	12	6	
Fort William and Port Arthur	Dec. 16–29	3		Occurring at Fort William.
London	Feb. 3–Apr. 5	9		
North Bay	do	1		
Perth	Mar. 1–31	14		
Toronto	Jan. 17–Mar. 31	15		
Ottawa	Feb. 17–May 17	11	1	
Windsor	Feb. 1–Mar. 15	52	11	
Quebec—				
Montreal	Nov. 30–Feb. 23	7		
Saskatchewan—				
Regina	Dec. 9–15	1		
Do	Dec. 30–Feb. 23	6	1	
Ceylon:				
Colombo	Nov. 11–17	3	1	
Do	Jan. 20–Apr. 12	6	1	
Chile:				
Antofagasta	Jan. 6–Apr. 12	6	1	
Concepcion	Oct. 1–Dec. 31		14	
Talcahuano	Nov. 26–Dec. 2	3		Dec. 22, 1923: Five cases present.
Valparaiso	Dec. 9–15		1	
Do	Jan. 13–Mar. 15		8	
China:				
Amoy	Nov 18–Dec. 8		11	
Do	Jan. 6–Apr. 19		16	Including Kulangsu, 14 deaths; and in hospital, Feb. 9, 1924, more than 30 cases stated to be present.
Antung	Dec. 31–May 4	6	2	
Canton	Dec. 23–Feb. 23			Present.
Chungking	Nov. 4–Dec. 29			Present and endemic.
Do	Dec. 30–Apr. 12			Stated to be widespread.
Foochow	Nov. 4–Dec. 15			Present.
Do	Dec. 31–Apr. 5			Do.
Hongkong	Oct. 28–Dec. 29	769	680	
Do	Dec. 30–Mar. 22	590	601	
Manchuria—				
Dairen	Dec. 31–Jan. 20	2		
Do	Mar. 3–Apr. 20	4	1	
Harbin	Nov. 12–Dec. 22	36		
Do	Jan. 1–Mar. 17	19	5	
Nanking	Dec. 2–15			Do.
Do	Dec. 30–Apr. 19			Do.
Shanghai	Dec. 29			Prevalent.
Do	Jan. 6–Apr. 19	31	77	Cases, foreign; deaths, Chinese and foreign.
Tientsin	Mar. 23–29	2		Reported by mission and British municipality.
Chosen (Korea):				
Chemulpo	Jan. 1–31	1		
Seoul	Nov. 1–30	1		
Do	Feb. 1–Mar. 31	5		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Colombia:				
Barranquilla	Apr. 6–12		2	
Buenaventura	Nov. 18–Dec. 15	8		
Do	Apr. 3–12	3		
Costa Rica:				
Port Limon	Feb. 18–Apr. 5	2		
Czechoslovakia				Oct. 1–Dec. 31, 1923: Cases, 1; deaths 1, occurring in Slovakia.
Dominican Republic:				
La Romana	Jan. 27–Mar. 22	14		
Ecuador:				
Esmeraldas	Nov. 16–30	4		
Guayaquil	Dec. 1–31	1		
Do	Jan. 1–Feb. 29	3		
Milagro	Apr. 1–15	1		
Quito	Nov. 1–30	167	26	
Egypt:				
Alexandria	Feb. 27–Apr. 15	4	7	
Cairo	Jan. 1–Feb. 11	3	1	
Port Said	Nov. 24–Dec. 2	1		
Do	Apr. 16–22	2		
Esthonia				Nov. 1–Dec. 31, 1923: Cases, 38. Jan. 1–Feb. 29, 1924: Cases, 14.
Finland				Apr. 1–15, 1924: Cases, 1.
France:				
Cherbourg	Feb. 9–15	1		British seaman.
Gibraltar	Mar. 3–Apr. 13	2		
Great Britain:				
Liverpool	Mar. 2–8	1		In family of seaman recently returned from Oporto, Portugal.
Greece:				
Saloniki	Oct. 22–Dec. 30		11	
Do	Dec. 31–Mar. 23	23	10	
Guadeloupe (West Indies)				Jan. 2–16, 1924: Present.
Abymes	Feb. 16			Present. Vicinity of Point à Pitre.
Basse Terre	Dec. 18			Present.
Do	Jan. 12–Feb. 16			Do.
Marie Galante Island	Dec. 18			Off shore island: Present.
Do	Feb. 16			Present. Estimated 60 cases.
Moule	Jan. 12–Feb. 16			Present.
Point à Pitre	Dec. 18			Present in vicinity.
Haiti:				
Cape Haitien	Feb. 3–Apr. 26	4		Mar. 9–15, 1924: Two cases in hospital.
Hinche	Feb. 10–16	1		
Port au Prince	Feb. 17–Mar. 1	2	1	Developed at Limbe, Haiti.
India				Oct. 14–Dec. 29, 1923: Cases, 9,720; deaths, 2,241.
Do				Dec. 30, 1923–Mar. 29, 1924: Cases 42,538; deaths, 8,422.
Bombay	Oct. 28–Dec. 29	55	25	
Do	Dec. 30–Apr. 5	922	459	
Calcutta	Dec. 16–29	4	4	
Do	Dec. 30–Apr. 5	18	16	
Karachi	Dec. 30–Apr. 26	151	58	
Madras	Nov. 4–Dec. 29	23	3	
Do	Dec. 30–Apr. 19	327	32	
Rangoon	Nov. 4–Dec. 29	12	4	
Do	Dec. 30–Apr. 19	73	27	
Indo-China:				
City—				
Saigon	Nov. 4–Dec. 29	133	74	Including 100 square kilometers of surrounding country.
Do	Dec. 31–Apr. 5	733	411	
Iraq:				
Bagdad	Oct. 24–Dec. 29	46	28	
Do	Dec. 30–Feb. 16	44	33	
Italy:				
Treviso	Apr. 1–15	15		Estimated.
Trieste	Feb. 17–23	4		
Turin	Feb. 18–24	1		
Jamaica				Nov. 25–Dec. 29, 1923: Cases, 115.
Do				Dec. 30, 1923–May 3, 1924: Cases, 443. Reported as alastrim. Delayed report for Feb. 17–23, 1924, 1 case.
Kingston	Nov. 25–Dec. 29	3		
Do	Dec. 30–Apr. 26	17		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Japan:				
Kobe	Feb. 14–May 12	17	7	
Nagoya	Apr. 6–12	3	1	
Taiwan	Jan. 1–Mar. 31	8		
Tokyo	Jan. 1–Apr. 12	136		
Yokohama	Mar. 30–Apr. 6	1		
Java:				
East Java—				
Patjiram	Mar. 8			Epidemic.
Soerabaya	Oct. 31–Dec. 29	348	60	
Do	Dec. 30–Mar. 22	232	49	
West Java—				
Batavia	Oct. 27–Dec. 28	65	13	
Do	Dec. 29–Apr. 11	67	8	
Latvia				Oct. 1–Dec. 31, 1923: Cases, 6; Jan. 1–Feb. 29, 1924: Cases, 5.
Malta	Feb. 1–29	1		
Mexico:				
Guadalajara	Jan. 27–May 17	5	10	
Manzanillo	Dec. 4–10	5	1	
Mazatlan	Mar. 31–Apr. 13		4	Apr. 21, 1924: Cases from 25–35. In city and vicinity. No mortality reported.
Mexico City	Nov. 25–Dec. 29	32		Including municipalities in Federal District.
Do	Dec. 30–Apr. 19	147	23	Do.
Monterey				Mar. 24, 1924, 11 cases officially announced.
Salina Cruz	Jan. 1–Apr. 30	5	4	Nine cases chicken pox present.
San Luis Potosi	Mar. 16–22		1	
Tampico	Jan. 21–May 20	47	4	From Irapuato, 9; La Barra, 1.
Vera Cruz	Nov. 3–Dec. 30		4	Jan. 21–Apr. 10, 1924: Cases, 36 (12 in soldiers or soldiers' families); deaths, 5.
Do	Jan. 6–Apr. 20	2	7	
Netherlands:				
Rotterdam	Jan. 20–26	3		
Palestine:				
Jaffa	Jan. 15–28	3		
Jerusalem	Feb. 18–25	1		
Persia:				
Teheran	Sept. 24–Dec. 23		4	
Do	Dec. 22–Jan. 31		2	
Poland				Sept. 23–Dec. 31, 1923: Cases, 83; deaths, 20. Jan. 1–Feb. 9, 1924: Cases, 275; deaths, 27.
Portugal:				
Lisbon	Nov. 11–Dec. 29	19	10	Corrected report.
Do	Dec. 31–May 3	99	19	
Oporto	Nov. 25–Dec. 29	39	23	
Do	Dec. 30–May 3	108	58	
Portuguese East Africa:				
Lourenco Marques	Dec. 30–Jan. 5	2		
Portuguese West Africa:				
Angola—				
Loanda	Dec. 2–29		5	
Russia:				
Ukraine				Aug. 1–Sept. 30, 1923: Cases, 143.
Siam:				
Bangkok	Oct. 28–Dec. 8	33	18	Nov. 25–Dec. 1, 1923; Epidemic
Do	Dec. 30–Apr. 5	12	2	
Siberia:				
Dauria Station	Oct. 21			Present. Locality on Chita Railway, Manchurian frontier.
Sierra Leone:				
Sherbro District—				
Tagbail	Nov. 1–15	3		
Spain:				
Barcelona	Nov. 15–Dec. 20		2	
Do	Jan. 3–Mar. 26		5	
Cadiz	Mar. 1–31	2		
Valencia	Nov. 25–Dec. 29	152	12	
Do	Dec. 30–May 10	441	37	
Straits Settlements:				
Penang	Mar. 16–29	2	2	
Singapore	Dec. 16–29	2	1	
Do	Dec. 30–Mar. 29	5		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases	Deaths.	Remarks.
Switzerland:				
Basel	Jan. 27–Feb. 9	4		Corrected.
Berne	Nov. 17–Dec. 22	15		
Do	Jan. 6–Apr. 26	38	1	
Lucerne	Nov. 1–Dec. 31	60		
Do	Jan. 1–Mar. 31	29		
Zurich	Jan. 27–Mar. 8	2		
Syria:				
Aleppo	Nov. 25–Dec. 1	1		In vicinity, at Djsr Choughour.
Beirut	Jan. 21–Feb. 20	2		
Damascus	Nov. 16–Dec. 15	7		
Do	Jan. 29–Apr. 12	38		
Tunis:				
Tunis	Oct. 27–Nov. 2	5	1	
Do	Jan. 8–May 5	11	6	
Turkey				Dec. 1–31, 1923: Cases, 120; deaths, 15.
Constantinople	Nov. 11–Dec. 8	3		
Do	Jan. 6–Apr. 5	4	1	
Union of South Africa				Oct. 1–31, 1923: Colored, cases, 41; deaths, 2; white, cases, 3. Feb. 1–29, 1924: Cases, 71 (white, 6); 1 death.
Cape Province	Oct. 28–Dec. 8			Outbreaks.
Do	Jan. 20–Apr. 12			Do.
Natal	Oct. 28–Nov. 3			Do.
Do	Mar. 16–22			Do.
Orange Free State	Oct. 28–Nov. 24			Do.
Do	Jan. 20–Apr. 12			Do.
Transvaal	Nov. 18–Dec. 1			Do.
Do	Mar. 11–17			Do.
Johannesburg	Nov. 25–Dec. 15	3		
Do	Feb. 3–23	2		
Uruguay:				
Montevideo	Oct. 1–31	1		
Venezuela:				
Caracas	Jan. 22			Epidemic.
Margarita Island—				
Punta Piedra	Mar. 21	60		20 miles from mainland.
On vessels:				
Steamship Coppename	Mar. 19	1		At New Orleans from Puerto Barrios, Guatemala.
U. S. Naval Hospital ship Mercy.	Apr. 1	1		At St. Thomas, Virgin Islands, from Culebra, P. I. Patient had been in Jamaica, W. I., two weeks previous. Case reported as alastrim.
S. S. Nitokris	Apr. 30	1		At Guayaquil, from Valparaiso, Chile. Under treatment at lazaretto.
S. S. Torres	Jan. 14	1		At New Orleans quarantine station from Tampico, Mexico, via ports. Case in seaman signed on at Galveston, Tex., on outward voyage.
S. S. Tupper	Jan. 20–26	1		At Gonaives, Haiti.
S. S. Vasari	Dec. 31	1		At Trinidad, West Indies, from Buenos Aires, Argentina. Vessel left Buenos Aires Dec. 15, 1923, for New York, via Santos, Rio de Janeiro, Trinidad, Barbados.
Sch. Annie M. Parker	Jan. 23	3		At sea. Vessel abandoned and crew removed to vessel bound for Rotterdam. Patients removed at Liverpool Feb. 28, bound for Newfoundland.

TYPHUS FEVER.

Algeria:			
Algiers	Nov. 1–Dec. 31	7	3
Do	Jan. 1–Mar. 31	21	7
Bolivia:			
La Paz	Oct. 1–Dec. 31	43	5
Do	Jan. 1–Mar. 31	31	3

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Porto Alegre	Feb. 24–Mar. 1		1	
Bulgaria:				
Sofia				Nov. 18–Dec. 15, 1923: Paratyphus fever, cases, 17. Jan. 6–Mar. 29, 1924: Paratyphus fever, cases, 9.
Canary Islands:				
Santa Cruz de Teneriffe	Jan. 14–Feb. 17		2	
Ceylon:				
Colombo	Feb. 24–Mar. 1	1	1	Case from port, 1.
Chile:				
Antofagasta	Dec. 2–8	4		
Do	Apr. 6–12	2		
Concepcion	Oct. 1–Nov. 30		4	Dec. 11–24, 1923: Deaths, 3.
Do	Jan. 8–Apr. 21	2	13	In district, at 12 localities, 92 cases.
Iquique	Jan. 20–26		1	
Talcahuano				Dec. 5, 1923: 3 cases under treatment. Jan. 12, 1924: 1 case under treatment.
Do	Jan. 31–Apr. 26	6	2	
Valparaiso	Nov. 25–Dec. 15		29	Dec. 24, 1923: In hospital, 34 cases.
Do	Dec. 30–Mar. 15		44	Reports from two districts of the Province of Valparaiso.
China:				
Antung	Nov. 12–Dec. 30	5		
Chungking	Nov. 18–24			Present.
Do	Dec. 16–29			Endemic.
Do	Dec. 30–Feb. 16			Do.
Manchuria—				
Harbin	Mar. 18–24		1	
Chosen (Korea):				
Chemulpo	Feb. 1–Mar. 31	5	3	
Seoul	do	86	7	
Czechoslovakia				Oct.–Dec., 1923: Cases, 21.
Danzig-Polish frontier:				
Mühlbanz	Mar. 6			Present: Origin stated to be focus at Mallinia.
Ecuador:				
Quito	Nov. 1–30	14	1	
Egypt:				
Alexandria	Nov. 19–Dec. 23	3		
Do	Jan. 8–Apr. 1	7		
Cairo	Sept. 10–Dec. 31	39	11	
Do	Jan. 8–Feb. 4	5	3	
Esthonia				Nov. 1–30, 1923: Paratyphus fever, cases, 8. Dec. 1–31, 1923: Typhus fever, cases, 15; paratyphus fever, cases, 4. January, 1924: Paratyphus fever, cases, 6.
Finland				Dec. 1–15, 1923: Paratyphus fever, cases, 15. Feb. 15–Mar. 31, 1924: Paratyphus fever, cases, 12.
Germany:				
Coblenz	Jan. 27–Feb. 2	1		
Greece:				
Athens	Jan. 11–Feb. 20		7	
Saloniki	Nov. 26–Dec. 30	7	3	
Hungary				July 1–Aug. 31, 1923: Cases, 24.
Budapest	Jan. 27–Apr. 19	35	13	
Java:				
East Java—				
Soerabaya	Dec. 9–29	12		
Do	Dec. 30–Jan. 5	2		
Latvia				Oct. 1–Dec. 31, 1923: Cases, 22. Paratyphus fever, 12; recurrent typhus, 3. Jan. 1–Feb. 29, 1924: Cases, 48. Paratyphus, A, 1; B, 1. Recurrent, 1 case.
Libau	Apr. 8–15	4		
Lithuania				Year, 1923: Cases, 819; deaths, 86; recurrent typhus, 13 cases. Feb. 1–29, 1924: Cases, 51; deaths, 9.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Durango	Dec. 1-31		2	
Do	Jan. 1-Feb. 29		3	
Guadalahara	Jan. 27-May 10	5	9	Feb. 1-29, 1924: Cases, 2; deaths, 1.
Mexico City	Nov. 25-Dec. 29	86		Including municipalities in Federal district.
Do	Dec. 30-Apr. 19	90	8	Do.
San Luis Potosi	Jan. 17-23		1	
Torreon	Feb. 1-Mar. 31		6	
Netherlands:				
Amsterdam	Mar. 2-Apr. 26	4		
Norway:				
Stavanger	Dec. 25-31	1		
Palestine:				
Jaffa	Jan. 1-Apr. 15	7		
Jerusalem	Feb. 19-28	2		
Persia:				
Teheran	Sept. 24-Oct. 23		1	
Poland				Sept. 23-Dec. 31, 1923: Cases, 947; deaths, 92; recurrent typhus, cases, 67; deaths, 1. Jan. 1-Feb. 9, 1924: Cases, 1,232, deaths, 102. Recurrent cases, 63. Jan. 6-Feb. 2, 1924: Cases, 341; deaths, 26. Recurrent fever, cases, 27.
Pomerellen	Jan. 8-Mar. 25	17	4	Locality on Danzig-Polish frontier.
Portugal:				
Oporto	Jan. 27-Feb. 2	2		
Rumania:				
Kishineff district	Nov. 1-Dec. 31	15		
Russia				Reported present in various sections, Mar. 12, 1924.
Karelian Republic	Mar. 12			Prevalent.
Novo Cherkarsk	do			Do.
Rostov-on-Don	do			Do.
Saratov	do			Do.
Ukraine				Aug. 1-Sept. 30, 1923: Cases, 768. Recurrent typhus: Aug. 1-Sept. 30, 1923: Cases, 2,307.
Siberia:				
Vladivostok	Feb. 19			Present and verging on epidemic prevalence.
Spain:				
Barcelona	Nov. 29-Dec. 12		2	
Do	Jan. 3-Apr. 2		6	
Madrid	Dec. 1-31		7	
Do	Jan. 1-31		2	
Syria:				
Damascus	Jan. 27-Feb. 2	1		
Tunis:				
Tunis	Feb. 5-11	1		
Turkey				Dec. 1-31, 1923: Cases, 41; deaths, 5.
Constantinople	Nov. 11-Dec. 29	15	1	
Do	Dec. 30-Apr. 5	11		
Union of South Africa				Oct. 1-31, 1923: Colored, 287 cases, 58 deaths; white, 2 cases; total, 289 cases, 58 deaths. Jan. 1-Feb. 29, 1924: Cases, 407; deaths, 75 (colored). Among white population, 7 cases. Total cases, 414; deaths, 75.
Cape Province				Oct. 1-31, 1923: Colored, cases, 245; deaths, 47.
Do				Jan. 1-Feb. 29, 1924: Cases, 168; deaths, 26. Feb. 24-Apr. 12, 1924: Outbreaks.
Natal				Oct. 1-31, 1923: Colored, cases, 4; deaths, 3.
Do				Jan. 1-Feb. 29, 1924: Cases, 90; deaths, 14. Feb. 24-Mar. 1, 1924: Outbreaks.
Durban	Nov. 24-Dec. 1	73		Cases occurring among native stevedores in the harbor area of the port and confined to one barracks.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 29, 1923, to June 6, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Union of South Africa—Con.				
Orange Free State				Oct. 1–31, 1923: Colored, cases, 25; deaths, 8. Feb. 24–Mar. 1, 1924: Outbreaks.
Do				Jan. 1–Feb. 29, 1924: Cases, 59; deaths, 10. Mar. 23–Apr. 5: Outbreaks.
Kroonstad District	Jan. 20–26			Outbreaks on 2 farms.
Transvaal				Oct. 1–31, 1923: Colored, cases, 13.
Do				Jan. 1–Feb. 29, 1924: Cases, 90; deaths, 26.
Johannesburg	Oct. 1–Dec. 31	3	4	
Do	Jan. 6–Mar. 29	8		
Potschefstrom District	Jan. 20–26			Outbreaks on 7 farms.
Venezuela:				
Maracaibo	Dec. 16–22		1	
Do	Feb. 17–May 3		8	
Yugoslavia:				
Croatia—				
Zagreb	Dec. 2–15	3		
Do	Feb. 17–23	1		
Serbia—				
Belgrade	Nov. 25–Dec. 1	1		
On vessel:				
S. S. Malta Maru	Mar. 17	1		At Rotterdam, Netherlands, from South America.

YELLOW FEVER.

Brazil:				
Pernambuco City	Nov 16	3	2	
West Africa (French Dahomey):				
Porto Novo				May 26, 1924: Present.